

Natural Resources Conservation Service

# Utah Basin Outlook Report January 1, 1997



# **Basin Outlook Reports**

## and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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# STATE OF UTAH GENERAL OUTLOOK Jan 1, 1997

### SUMMARY

Water supply conditions across the entire state of Utah are excellent. The Virgin watershed has the lowest snowpack of any this year and it is above average at 119% of normal. Northern Utah has some phenomenal snowpacks (167%-215%), the highest since 1984 and should produce much above average runoff. Some areas have snowpacks 5 to 7 times greater than those of last year. Several large reservoirs such as Bear Lake and Strawberry should be able to add significantly to their current contents. Precipitation has been much above average since the beginning of the water year and it has replenished a great deal of soil moisture so desperately needed in the south and southeastern areas of the state. As a general rule, it is not often that the entire state has above average water supply conditions. It is far more prevalent that at least one and typically several watersheds will have below normal conditions. There is a very significant spread (119% to 215% of average) between the snowpacks in northern Utah and southern Utah, but all are above normal. Many areas in the north require only 1/3 of normal January-March snowpack accumulation to reach an average April 1 snowpack. Although it is very early in the water supply season and any outcome is still likely at this point including below normal runoff, given the extraordinary snowpacks on the Bear, Weber and Uintah Basin, there is a some potential for agricultural inundation this spring. Those areas prone to agricultural flooding are likely to experience it again this season. Future climatic conditions will determine the potential and extent of any inundation.

### **SNOWPACK**

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 174% of normal, about 2.5 times those of last year. Snowpacks in the north are much above average ranging from 167% to 215% of normal. In the south, snowpacks range from 119% to 166% of average. In southeastern Utah, an area hard hit by drought last year, snowpacks range from 109% to 203 % of average, 5 to 7 times as much as last year. These are the highest January 1 snowpacks since 1984. Most areas in the north require only 1/3 to 1/2 of the normal January-March snowpack increase to reach an average April 1 snowpack.

### **PRECIPITATION**

Mountain precipitation in December, as measured by the NRCS SNOTEL system was a phenomenal 220% of average statewide, a fairly rare occurrence. This brings the seasonal accumulation (Oct-Dec) to 158% of average. Northern Utah received the most precipitation in December (225%-280%) with the south receiving 124% to 147% of average.

National Weather Service precipitation figures indicate the greatest precipitation was in northern Utah with the extreme north receiving the most. Generally the entire state

exceeded normal amounts with only a few isolated areas receiving below 50%. Trenton and Randolph reported their wettest December on record with 442% and 466% of normal respectively. Many other stations were over 200%. The isolated areas that received sparse amounts include: Delta with 31%, Hanksville at 35% and Monticello with 36% of average.

### RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 72% of capacity. Most reservoirs are in excellent shape for spring runoff.

### **STREAMFLOW**

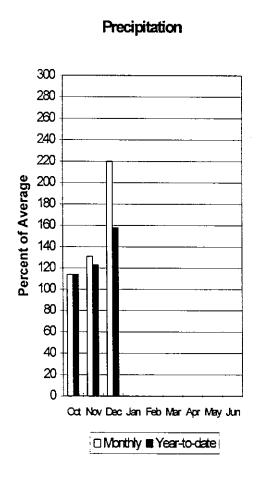
Streamflow forecasts for snowmelt runoff range from near average to much above average throughout Utah. In the north, much above average conditions prevail whereas in the south, near normal to above normal streamflow is expected. Streamflow in the north could have much higher peak flows and longer duration than normal. There is a significant potential, given even average conditions the remainder of the snowpack accumulation season, for some agricultural inundation in flood prone areas of northern Utah.

# 40 35 Snow Water Equivalent (in 30 25 20 15 10 5 0 1-Jan 1-Feb 1-Mar 1-May Current Average

Maximum

Minimum

Mountain Snowpack



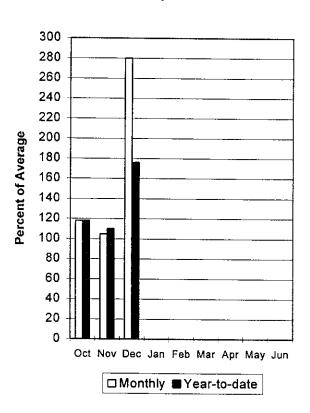
### Bear River Basin Jan 1, 1997

Snowpack on the Bear River Basin is much above average at 215% of normal, ranging from 161% to 344% of average at specific sites. This is the highest snowpack on the Bear since 1984. Assuming average snowpack accumulations from here on, the Bear River Watershed would have 142% of normal on April first. December precipitation was phenominal at 280%, which brings the seasonal accumulation (Oct-Dec) to 176% of average. Water supply conditions are excellent and much above average runoff is expected with some potential for agricultural flooding. Reservoir storage is at 63% capacity.

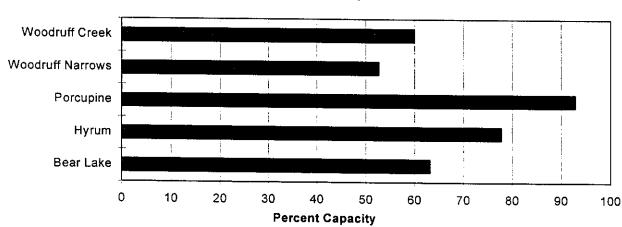
### Mountain Snowpack

# 35 30 30 25 20 15 10 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun Current - Average Maximum Minimum

### Precipitation



### Reservoir Storage



# BEAR RIVER BASIN Streamflow Forecasts - January 1, 1997

	=======		========	==========	===========		========	
		<<=====	Drier ====	== Future C	onditions ==	===== Wetter	====>>	
		1					j	
Forecast Point	Forecast	=======	=========	= Chance Of	Exceeding * =		=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
	=======				========	==========	========	
BEAR R nr UT-WY State Line	APR-JUL	99	124	145	126	169	212	115
BEAR R nr Woodruff (2)	APR-JUL	81	146	190	128	234	299	149
BIG CK nr Randolph	APR-JUL	2.11	4.43	6.00	158	7.57	9.89	3.80
BEAR R nr Randolph, UT	APR-JUL	70	118	   150	127	400	27.0	440
SMITHS FORK or Border, WY	APR-JUL	119	137			182	230	118
·				150	147	163	181	102
THOMAS FK nr WY-ID State Line	APR-JUL	25	39	53 	161	72	115	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	250	318	ı   365	127	l 412	480	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	10.0	14.2	18.0	148	23	32	12.2
CUB R nr Preston	APR-JUL	42	53	60	128	67	78	47
				Ì		1		
LOGAN R nr Logan	APR-JUL	98	134	165	154	204	278	107
BLACKSMITH Fk nr Hyrum	APR-JUL	48	64	78	144	95	128	54

	EAR RIVER BASIN e (1000 AF) - End	of Decem	ber	   	BEAR RIVER BASIN   Watershed Snowpack Analysis - January 1, 1997					
Reservoir	Usable   *** Usable Storage *** Capacity  This Last			ge ***	Num Watershed o		This Year as % of			
=======================================	 	Year	Year	Avg	Data	Sites La	ast Yr	Average		
BEAR LAKE	1421.0	897.5	576.2	992.6	BEAR RIVER, UPPER (abv Ha	6 17	 79	200		
HYRUM	15.3	11.9	15.3	10.0	BEAR RIVER, LOWER (blw Ha	7 2'	12	230		
PORCUPINE	11.3	10.5	9.5	2.8	LOGAN RIVER	4 20	03	226		
WOODRUFF NARROWS	57.3	30.2	44.0	j	RAFT RIVER	0	0	0		
WOODRUFF CREEK	4.0	2.4	3.1		BEAR RIVER BASIN 1	3 19	97	217		

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

### Weber and Ogden River Basins Jan 1, 1997

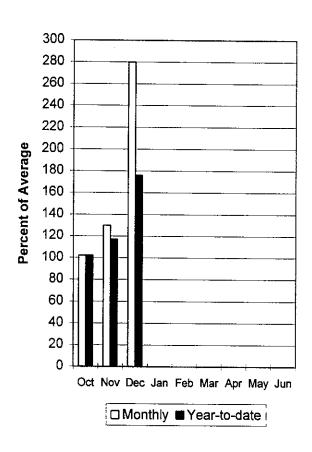
Snowpack on the Weber and Ogden Watersheds is at 191% of average. Individual sites range from 152% to 242 % of average. This is the best January 1 snowpack on the Weber since 1984. Precipitation during December was phenominal at 280% of average, bringing the seasonal accumulation (Oct-Dec) to 176% of normal. Reservoir storage on the Weber system is at 66% of capacity. General water supply conditions are excellent with the prospect of having much above average runoff this spring. Streamflows could have much higher peaks and longer duration than normal, with some potential for agricultural flooding.

### Mountain Snowpack

# 35 (ii) 30 25 20 15 15 1-Mar 1-Apr 1-May 1-Jun Current - - - Average 1

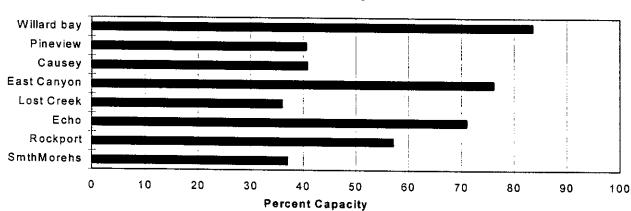
Maximum

### Precipitation



### Reservoir Storage

Minimum (



### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - January 1, 1997

		<b>&lt;&lt;====</b>	Drier ====	== Future C	onditions ==	===== Wetter	====>>				
		1					j				
Forecast Point	Forecast	=======	========	= Chance Of t	Exceeding * =		=======				
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.			
		(1000AF)	(1000AF)	:	(% AVG.)	(1000AF)	(1000AF)	(1000AF)			
	=========			!	========	==========		========			
SMITH AND MOREHOUSE CK or Oakley	APR-JUN	30	38	44	147	50	58	30			
WEBER R nr Oakley	APR-JUL	123	144	159	130	174	195	122			
ROCKPORT RESEROIR inflow	APR-JUL	124	154	174	130	194	224	134			
				1	J						
CHALK CK at Coalville, Ut	APR-JUL	38	54	65	148	76	92	44			
WEBER R nr Coalville, Ut	APR-JUL	125	156	177	130	198	229	136			
ECHO RESERDIR Inflow	APR-JUL	165	210	240	136	270	315	176			
1007 01/2 - 41					ļ						
LOST CK Res Inflow	APR-JUL	9.7	18.8	25	145	31	40	17.2			
E CANYON CK nr Morgan	APR-JUL	26	35	40	133	46	54	30			
WEBER R at Gateway	APR-JUL	381	422	450	130	478	519	347			
C FORK COREW B											
S FORK OGDEN R nr Huntsville	APR-JUL	65	80	90	143	100	115	63			
PINEVIEW RESERGIR Inflow	APR-JUL	122	156	180	145	204	238	124			
WHEELER CK nr Huntsville	APR-JUL	7.24	8.88	10.00	161	11.12	12.76	6.20			

WEBER & OGDEN				!	WEBER & OGDEN			
Reservoir Storage (10	JUU AF) - End	of Decem	ber ======	 =========	Watershed Snowpac	k Analysis - 	January 1	, 1997
	Usable			ge ***		Number	This Year as % of	
(eservoir	Capacity	This	Last		Watershed	of	======	
		Year	Year	Avg		Data Sites	Last Yr	Average
	=======================================		========	======	==== <b>=======</b> =========================	=========	========	=======================================
CAUSEY	7.1	2.9	3.8	2.1	OGDEN RIVER	4	354	209
EAST CANYON	49.5	37.7	41.0	33.3	WEBER RIVER	8	228	184
ECHO	73.9	52.5	58.0	41.4	WEBER & OGDEN WATERSHED	s 12	269	194
LOST CREEK	22.5	8.1	17.0	12.7				
PINEVIEW	110.1	44.7	69.0	50.0				
ROCKPORT	60.9	34.8	45.0	34.1				
WILLARD BAY	215.0	179.7	175.0	104.9				
				į				
=======================================		=======	=======	=======	=======================================			

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

### Utah Lake, Jordan River & Tooele Valley Basins Jan 1, 1997

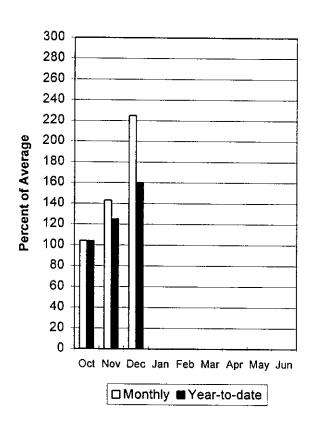
Snowpacks over these watersheds are much above average at 167% of normal, the highest Jan 1 snowpack since 1984. Individual sites range from 99% to 222% of average. Precipitation during December was much above average at 225% of normal, bringing the seasonal accumulation (Oct-Dec) to 160% of average. Reservoir storage is at 84% of capacity. Water supply conditions are much above average and much above average peak flows, with longer flow durations, can be expected.

### Mountain Snowpack

# 40 35 (ii) 30 25 15 0 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun Current - Average

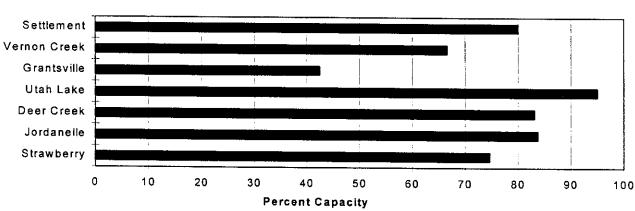
Maximum

### Precipitation



### Reservoir Storage

Minimum



### 

# UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - January 1, 1997

	========		========	=========	=========	=== <b>===</b> =====		:========
		<<======	: Drier ====	== Future Co	nditions ===	==== Wetter	====>>	1
Forecast Point	Forecast	=======	========	= Chance Of E	xceeding * ==	==========	=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)		(% AVG.)		(1000AF)	(1000AF)
PAYSON CK nr Payson	APR-JUL	1.01	3.58	4.80	109	6.02	8.80	4.40
SPANISH FORK or Castilla	APR-JUL	21	63	87	118	112	153	74
HOBBLE CK nr Springville	APR-JUL	10.0	17.8	22	117	26	34	18.8
PROVO R nr Hailstone	APR-JUL	97	124	   141	129	158	185	109
PROVO R below Deer Creek Dam	APR-JUL	92	136	163	127	190	234	128
AMERICAN FORK nr American Fk.	APR-JUL	24	35	41	128	47	58	32
UTAH LAKE inflow	APR-JUL	191	314	l [ 390	120	634	590	324
L COTTONWOOD CRK nr SLC	APR-JUL	37	45	50	128	55	63	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	39	46	51	134	56	63	38
PARLEY'S CK nr SLC	APR-JUL	7.0	13.0	16.7	105	20	26	15.9
MILL CK or SLC	APR-JUL	4.74	6.57	7.70	119	8.83	10.85	6.50
DELL FK nr SLC	APR-JUL	3.34	6.48	8.30	117	10.12	13.49	7.10
EMIGRATION CK nr SLC	APR-JUL	0.71	3.05	4.50	107	5.95	8.32	4.20
CITY CK nr SLC	APR-JUL	4.48	7.32	9.10	110	10.88	13.70	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	870	1428	2000	149	2801	4596	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	646	1546	l ] 2800	122	5071	12141	2300
S WILLOW CK nr Grantsville	APR-JUL	1.18	2.68	3.70	119	4.72	6.22	3.10

UTAH	LAKE,	JORDAN	RIVER	&	TOOELE	VALLEY
Reservoi	r Stora	age (10	00 AF)	-	End of	December

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Watershed Snowpack Analysis - January 1, 1997

Reservoir	Usable   Capacity	y This Last			Watershed	Number of	This Year as % of	
	İ	Year	Year	Avg	τ	ata Sites	Last Yr	Average
	=======================================		=======	====== :				========
DEER CREEK	149.7	124.5	115.0	93.5	PROVO RIVER & UTAH LAKE	7	283	185
GRANTSVILLE	3.3	1.4	2.3		PROVO RIVER	4	295	208
SETTLEMENT CREEK	1.0	0.8	0.8	0.6	JORDAN RIVER & GREAT SAI	.T 5	217	155
STRAWBERRY-ENLARGED	1105.9	825.4	663.0	j	TOOELE VALLEY WATERSHEDS	6 4	320	153
UTAH LAKE	870.9	827.4		601.6	UTAH LAKE, JORDAN RIVER	& 16	260	167
VERNON CREEK	0.6	0.4	0.5	0.4	·			

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

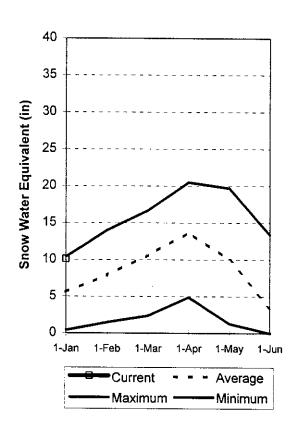
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

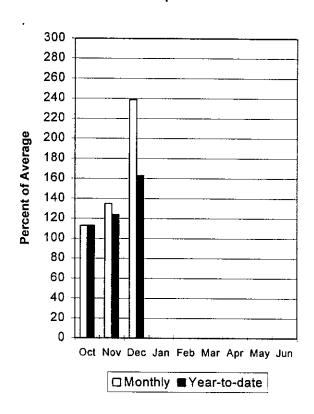
### Uintah Basin and Dagget SCD's Jan 1, 1997

Snowpacks across the Uintah Basin and North Slope areas are somewhat divided with a north to south split. The north is above to much above average at 150% and the southern area is higher yet, near 190% of average. This is the highest Jan 1 snowpack since 1965. Precipitation during December was much above average, nearly 240%, bringing the seasonal accumulation (Oct-Dec) to 163% of average. Reservoir storage is at 74% of capacity. General water supply conditions are excellent and much above average streamflow can be expected, along with much higher peak flows and some potential for agricultural innundation.

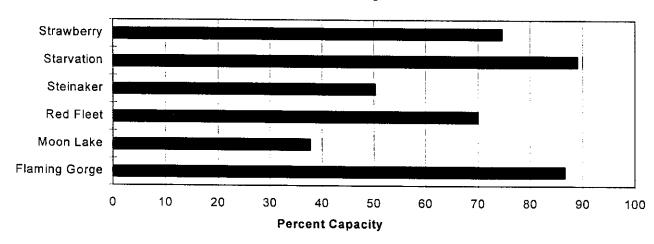
### **Mountain Snowpack**



### Precipitation



### Reservoir Storage



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### UINTAH BASIN & DAGGET SCD'S

Streamflow Forecasts - January 1, 1997

		========	=========	=========	========		<b>=====</b> =====	=========
		<b>  &lt;&lt;====</b>	Drier ====	== Future Co	onditions ==	===== Wetter	. ====>>	
		<u> </u>					ĺ	
Forecast Point	Forecast	=======		= Chance Of 8	Exceeding * :	:=== <b>===</b> =====	=======	
	Period	90%	70%		Probable)	30%	10%	30-Yr Avg.
		(1000AF)		•	(% AVG.)		(1000AF)	(1000AF)
				•		============	==========	=======================================
MEEKS CABIN RESERVOIR Inflow	APR-JUL	87	104	115	120	126	143	96
STATE LINE RESERVOIR INFLOW	APR-JUL	27	34	38	127	43	49	30
HENRYS FORK or Manila	APR-JUL	39	55	65	155	76	91	42
FLAMING GORGE RES INFLOW	APR-JUL	1112	1632	i i 1800	151	1968	2488	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	17.4	22	25	126	28	33	19.8
ASHLEY CK nr Vernal	APR-JUL	51	62	70	137	78	90	51
WF DUCHESNE RIVER or Hanna	ADD - IIII	37	70		470			
DUCHESNE R nr Tabiona	APR-JUL	24	30	36	139	43	48	26
· · · · · · · · · · · · · · · · · · ·	APR-JUL	109	128	140	133	152	171	105
ROCK CK nr Mountain Home	APR-JUL	92	109	120 	128	132	149	94
UPPER STILLWATER RESV inflow	APR-JUL	81	97	110	136	123	139	81
DUCHESNE R abv Knight Diversion	APR-JUL	185	227	255	135	283	325	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	55	79	100	170	123	145	59
CURRANT CREEK RESV Inflow	APR-JUL	24	29	   33	157	37	42	21
STARVATION RESERVOIR inflow	APR-JUL	139	181	210	180	239	281	117
MOON LAKE Inflow	APR-JUL	68	81	90	130	99	112	69
	71111 002		31	, , <u>,</u>	150	77	112	07
YELLOWSTONE R nr Altonah	APR-JUL	58	74	85	131	96	112	65
DUCHESNE R at Myton	APR-JUL	312	388	440	167	492	568	263
WHITEROCKS R nr Whiterocks	APR-JUL	50	68	80	138	92	110	58
UINTA R nr Neola	APR-JUL	71	97	   115	135	133	159	85
DUCHESNE R nr Randlett	APR-JUL	300	449	550	168	651	800	328
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	BASIN & DAGGET S ge (1000 AF) - Enc		mber		UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - January 1, 19					
Reservoir	Usable Capacity	*** Usable Storage ***   This Last   Year Year Avg		į	Watershed	Number of ta Sites	This Year	r as % of  Average		
=======================================				=======		======				
FLAMING GORGE	3749.0	3249.0	3279.0		UPPER GREEN RIVER in UTAH	6	231	147		
MOON LAKE	49.5	18.7	25.5	27.3	ASHLEY CREEK	2	683	159		
RED FLEET	25.7	18.0	20.0		BLACK'S FORK RIVER	2	130	133		
STEINAKER	33.4	16.8	27.0	18.2	SHEEP CREEK	1	500	135		
STARVATION	165.3	147.3	135.0	105.2	DUCHESNE RIVER	11	283	191		
STRAWBERRY-ENLARGED	1105.9	825.4	663.0	j	LAKE FORK-YELLOWSTONE CRE	4	181	166		
				ĺ	STRAWBERRY RIVER	4	424	213		
				j	UINTAH-WHITEROCKS RIVERS	2	490	194		
				i	UINTAH BASIN & DAGGET SCD	17	269	179		
			=======	========	=======================================		========			

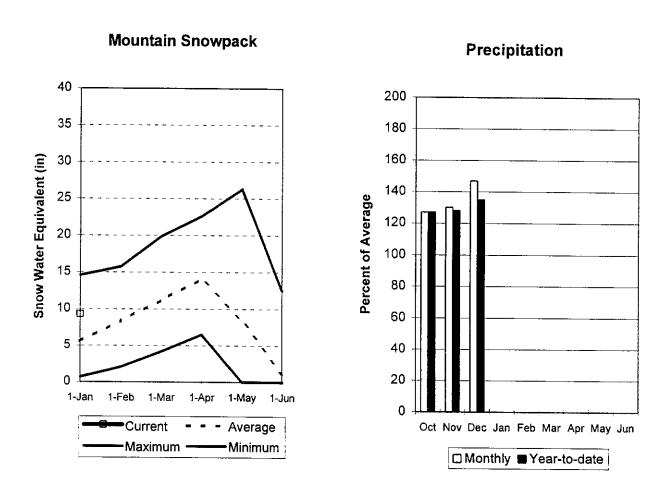
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

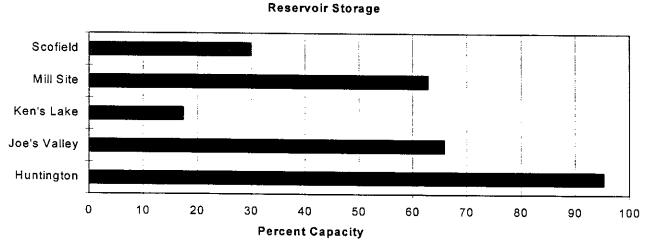
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

### Carbon, Emery, Wayne, Grand and San Juan Co. Jan 1, 1997

Snowpacks in this region are at 166% of average. The Blue Mountains, have 7 times more snow than last year. Individual sites range from 109% to 218% of normal. Precipitation during December was much above average at 147%, bringing the seasonal accumulation (Oct-Dec) to 135% of normal. Reservoir storage is at 50% of capacity. General water supply conditions are above average throughout the region and above average flows are expected. These conditions should help alleviate the extreme drought experienced in this area the past year.





### CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - January 1, 1997

		<<====================================	Drier ====	== Future Co	nditions ===	==== Wetter	====>>	
Forecast Point	Forecast	[   =======	:========	= Chance Of E	xceeding * ==	==========	 	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	 9.8	14.2	16.5	141   141	18.8	<b></b> 23	11.7
SCOFIELD RESV Inflow	APR-JUL	22	53	60	136	67	98	44
WHITE R blw Tabbyune Ck	APR-JUL	14.0	21	26	139	31	38	18.7
GREEN R at Green River, UT	APR-JUL	3731	4427	   4900	156	53 <b>73</b>	60 <b>69</b>	3151
ELECTRIC LAKE inflow	APR-JUL	12.1	17.7	j 22	146	27	35	15.1
HUNTINGTON CK or Huntington	APR-JUL	31	48	57	139	66	83	41
JOE'S VALLEY RESV Inflow	APR-JUL	43	59	   70	132	81	98	53
FERRON CK nr Ferron	APR-JUL	35	47	55	141	63	75	39
COLORADO R nr Cisco	APR-JUL	4674	5731	6450	156	7169	8226	4132
MILL CK at Sheley Tunnel	APR-JUL	2.91	4.70	6.50	108	9.00	14.51	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	3.57	6.51	8.50	131	10.49	13.43	6.50
MUDDY CK nr Emery	APR-JUL	13.9	19.5	26	133	33	38	19.6
LOYD'S RESERVOIR inflow	MAR-JUL	1.60	2.49	4.00	138	6.45	10.05	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	2.20	3.40	5.50	138	8.10	12.84	4.00
SAN JUAN R nr Bluff	APR-JUL	829	1297	1560	135	1823	2292	1152

CARBON,	EMERY.	WAYNE,	GRAN	ID,	, &	SAN	JUAN Co.
Reservoir	Storage	(1000	AF)	-	End	of	December

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - January 1, 1997

Reservoir	Usable   Capacity	*** Usab This Year	le Storage Last Year	***       Avg	Watershed	Number of ata Sites	This Year	r as % of ====== Average
HUNTINGTON NORTH	4.2	4.0		2.0	PRICE RIVER	3	296	202
JOE'S VALLEY	61.6	40.6	45.0	42.7	SAN RAFAEL RIVER	3	192	150
KEN'S LAKE	2.3	0.4	1.6	j	MUDDY CREEK	1	207	144
MILL SITE	16.7	10.5	13.0	3.0	FREMONT RIVER	3	434	154
SCOFIELD	65.8	19.6	30.0	30.3	LASAL MOUNTAINS	1	508	109
				i	BLUE MOUNTAINS	1	675	203
				į	WILLOW CREEK	1	617	185
				j	CARBON, EMERY, WAYNE, GRA	a 13	281	166

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

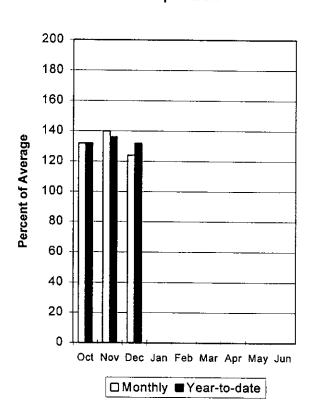
### Sevier and Beaver River Basins Jan 1, 1997

Snowpacks on the Sevier River Basin are at 131% of average and are fairly consistent over the watershed. They are almost 3 times those of last year, an indication of just how poor the 1996 wateryear was. Individual sites range from 104% to 205% of average. Precipitation during December was 124% of normal, bringing the seasonal accumulation (Oct-Dec) to 132% of average. Reservoir storage is at 55% of capacity. General water supply conditions are above average and streamflows should be much higher and of longer duration than last year.

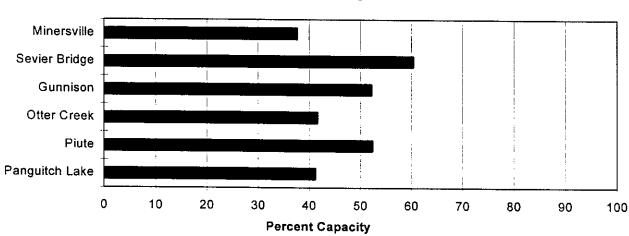
### **Mountain Snowpack**

### 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Jan 1-Mar 1-Apr 1-May \*Current Average Maximum Minimum

### Precipitation



### Reservoir Storage



### 

# SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - January 1, 1997

		<b></b>	:=== <b>==</b> =====				========	=========
		\ <=====	Drier ====	== Future Co	onditions ===	==== Wetter	====>>	
Forecast Point	Forecast	   <del></del>	========	- Chames Of E				
to bodat Forme	Period				Exceeding * ==		- 1	
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)  ========	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SEVIER R at Hatch	APR-JUL	15.1	43	59	109	76	103	<b>5</b> 4
SEVIER R nr Circleville	APR-JUL	32	61	80	107	99	128	75
SEVIER R nr Kingston	APR-JUL	34	68	88	106	108	142	83
ANTIMONY CK nr Antimony	APR-JUL	4.74	6.69	   7.70	104	8.71	10.88	7.40
E F SEVIER R nr Kingston	APR-JUL	6.9	25	35	117	46	63	
SEVIER R blw Piute Dam	APR-JUL	33	86	35   117	102			30
octibility of the party of the	AFR SUL	33	00	] 117 ]	102	148	201	115
CLEAR CK nr Sevier	APR-JUL	9.0	17.0	22	105	27	35	21
SALINA CK at Salina	APR-JUL	0.5	7.2	16.0	91	25	42	17.6
PLEASANT CK nr Pleasant	APR-JUL	6.72	8.82	10.00	118	11.18	13.60	8.50
EPHRAIM CK nr Ephraim	APR-JUL	7.7	11.7	   13.9	110 l	16.1	20	12.6
SEVIER R nr Gunnison	APR-JUL	31	171	255	107	339	480	239
CHICKEN CK nr Levan	APR-JUL	3.86	4.90	5.60	119	6.30	7.34	4.70
DAK CK nr Oak City	APR-JUL	0.20	1.18	   2.00	118	2.82	4.03	1.70
BEAVER R nr Beaver	APR-JUL	7.0	21	30	115	39	53	26
MINERSVILLE RESEROIR inflow	APR-JUL	2.6	12.4	19.0	114	26	35	16.7

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of December

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - January 1, 1997

=======================================			=======	<b></b>	, # <b>#####</b> ##############################	=======	·=========	====================================
	Usabl e	*** Usa	ble Storag	ge ***	N	lumber	This Year	r as % of
Reservoir	Capacity	This	Last	Ì	Watershed	of	=======	=======
	1	Year	Year	Avg	Dat	a Sites	Last Yr	Average
		=======	=======	====== =	=======================================	======		
GUNNISON	20.3	10.6	17.5	9.5	UPPER SEVIER RIVER (south	7	375	125
MINERSVILLE (RkyFd)	23.3	8.8	19.0	9.3	EAST FORK SEVIER RIVER	2	296	139
OTTER CREEK	52.5	21.9	46.9	23.8	SOUTH FORK SEVIER RIVER	5	427	120
PIUTE	71.8	37.6	57.5	29.3	LOWER SEVIER RIVER (inclu	6	244	133
SEVIER BRIDGE	236.0	142.7	219.2	87.0	BEAVER RIVER	2	338	138
PANGUITCH LAKE	22.3	9.2	18.2		SEVIER & BEAVER RIVER BAS	15	297	131
***********************	=======================================						=======	

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

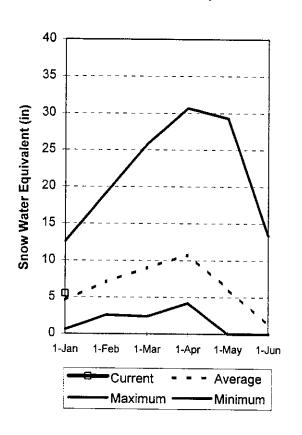
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

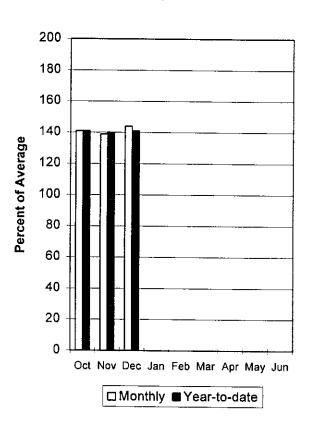
### E. Garfield, Kane, Washington, & Iron co. Jan 1, 1997

Snowpacks in this region are above normal at 119% of average, about 5 times that of last year. This is the lowest snowpack in the state, but still should produce excellent water supply this spring. Precipitation during December was much above average at 144%, bringing the seasonal accumulation (Oct-Dec) to 141% of normal. Recent rains have replenished soil moisture deficits and general water supply conditions are above average. Reservoir storage is at 74% of capacity. This region can expect a much better water supply year than last, which saw some extreme drought conditions in some areas.

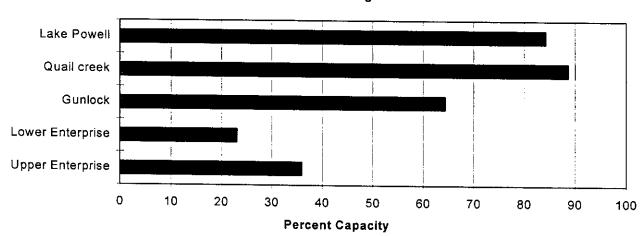
### **Mountain Snowpack**



### Precipitation



### Reservoir Storage



E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - January 1, 1997

	=======================================	========	==== <b>==</b> ====	=========	========	===========		=========
		<<===================================	Drier ====	== Future C	onditions =	====== Wetter	====>>	
Forecast Point	Forecast	   =======	=========	= Chance Of (	Exceeding *	============	  -=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
	=======================================	=========	========	=========	=========	==========	== <b>==</b> =====	==========
COAL CK nr Cedar City	APR-JUL	4.1	13.5	18.8	100	24	34	18.8
LAKE POWELL INFLOW	APR-JUL	8586		12000	155	İ	15393	7735
VIRGIN R nr Hurricane	APR-JUL	19.8		90	114		180	79
SANTA CLARA R or Pine Valley	APR-JUL	1.01		   6.00	113		12.51	5.30
				==== <b>===</b> ====	========	:=========	<b>====</b> =====	

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of December

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Watershed Snowpack Analysis - January 1, 1997

Reservoir	Usable Capacity		able Storag Last	e ***	Watershed	Number of	This Yea	r as % of
	· <b></b>	Year	Year	Avg	Da	ta Sites	Last Yr	Average
GUNLOCK	10.4	6.7	8.7	:	VIRGIN RIVER	<b>====</b> ================================	508	116
LAKE POWELL	24322.0	20498.0	21401.0	أ	PAROWAN	2	581	118
QUAIL CREEK	40.0	35.5	35.0	<b>-</b> j	ENTERPRISE TO NEW HARMONY	2	411	80
JPPER ENTERPRISE	10.0	3.6	7.4		COAL CREEK	2	418	96
LOWER ENTERPRISE	2.6	0.6	0.0		ESCALANTE RIVER	2	539	151
					E. GARFIELD, KANE, WASHIN	9	506	119

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

SNOW COURSE DATA
FOR THE STATE OF UTAH
AS Of JANUARY 1, 1997

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
AGUA CANYON SNOTEL	8900	1/01	,	3.48	6.0		DRY BREAD POND SNOTL	8350	1/01	1	19.35	5.8	9.6
ALTA CENTRAL	8800	12/27	81	23.6	14.9	19.0	DRY FORK SNOTEL	7160	1/01	1	8 · 0S	3.9	r
ASHLEY TWIN LAKES	10500				•	1	EAST SHINGLE LAKE	9800				1	
BEAVER DAMS SNOTEL	8000	1/01	,	4.85	3.6	4.6	EAST WILLOW CREEK SN	8250	1/01	١	3.75	9.0	2.0
BEAVER DIVIDE SNOTL	8280	1/01		10.48	5.6	8.4	FARMINGTON CANYON L.	6950					1
BEN LOMOND PK SNOTL	8000	1/01		38.55	8.6	15.9	FARMINGTON CN SNOTEL	8000	1/01	,	24.98	6.7	12.3
BEN LOMOND TR SNOTL	6000	1/01	,	18.35	2.5	11.1	FARNSWORTH LK SNOTEL	0096	1/01		9.38	4.6	8.7
BEVAN'S CABIN	6450					1	FISH LAKE	8700				,	ı
BIG FLAT SNOTEL	10290	1/01	t	11.28	3.4	8.7	FIVE POINTS LAKE SNO	10920	1/07	١	12.85	7.2	4.8
BIRCH CROSSING	8100				,		FRANCES FLATS	6700				8.8	9.6
BLACK FLAT-U.M. CK S	9400	1/01		6.78	2.1	4.2	G.B.R.C. HEADQUARTER	8700				,	1
BLACK'S FORK GS-EF	9340				1	1	G.B.R.C. MEADOWS	10000				1	i.
BLACK'S FORK JUNCIN	8930				r		GARDEN CITY SUMMIT	7600				1	i
BOX CREEK SNOTEL	9800	1/01	,	7.58	3.8	5.5	GEORGE CREEK	8840					ı
BRIAN HEAD	10000					•	GOOSEBERRY R.S.	8400				٠	1
BRIGHTON CABIN	8700	12/31	72	21.5	8.5	12.5	GOOSEBERRY R.S. SNOT	7900	1/01		3.68	1.0	4.7
BRIGHTON SNOTEL	8750	1/07	,	16.78	6.1	8.9	HARDSCRABBLE SNOTEL	7250	1/01		14.18	5.5	9.3
BROWN DUCK SNOTEL	10600	1/01	1	13.98	6.3	8	HARRIS FLAT SNOTEL	7700	1/01	1	2.98	8.0	3.1
BRYCE CANYON	8000				1.0	2.0	HAYDEN FORK SNOTEL	9100	1/01	1	10.85	7.6	6.8
BUCK FLAT SNOTEL	9800	1/01	ı	13.68	7.2	7.2	HENRY'S FORK	10000				1	ŀ
BUCK PASTURE	9700						HEWINTA SNOTEL	9500	10/1	,	6.48	4.3	3.9
BUCKBOARD FLAT	0006				1.9	1	HICKERSON PARK SNOTE	9100	1/01	1	3.58	0.7	2.6
BUG LAKE SNOTEL	7950	1/01	,	19.68	9.0	8.8	HIDDEN SPRINGS	5500	12/26	9	2.1	2.0	4.5
BURT'S-MILLER RANCH	7900				1	ì	HOBBLE CREEK SUMMIT	7420				F	ı
CAMP JACKSON SNOTEL	8600	1/01		8.18	1.2	4.0	HOLE-IN-ROCK SNOTEL	9150	1/01	•	4.15	2.1	2.3
CASTLE VALLEY SNOTL	9580	1/01		7.18	1.0	5.2	HORSE RIDGE SNOTEL	8260	1/01	ı	22.15	10.3	10.0
CHALK CK #1 SNOTEL	0016	1/01		18.25	9.4	10.3	HUNTINGTON-HORSESHOE	9800				,	1
CHALK CK #2 SNOTEL	8200	1/01	t	12.25	4.0	6.7	INDIAN CANYON SNOTEL	9100	1/01	+	8.95	1.8	4.1
CHALK CREEK #3	7500				ı	,	JOHNSON VALLEY	8850				1	1
CHEPETA SNOTEL	10300	1/01	ı	9.28	3.3	6.1	KILFOIL CREEK	7300				3	ı
CITY CREEK	7500	12/26	28	16.2	10.9	15.7	KILLYON CANYON	6300	1/03	10	3.7	0.0	4.7
CLEAR CK RIDG #1 SNT	9200	1/01	,	15.28	5.2	8.1	KIMBERLY MINE SNOTEL	9300	1/01	•	7.15	3.1	5.8
CLEAR CK RIDG #2 SNT	8000	1/01		10.75	3.9	6.1	KING'S CABIN SNOTEL	8730	1/01	1	9.68	1,5	5.4
CLEAR CREEK RIDGE #3	0099					ı	KLONDIKE NARROWS	7400				1	1
COLD WATER SPRINGS	6030				t		KOLOB SNOTEL	9250	1/01	ı	11.55	1.7	7.2
CORRAL	8200				1	1	LAKEFORK #1 SNOTEL 1	10100	1/01	•	11.05	5.6	5.2
CURRANT CREEK SNOTEL	8000	1/01	ı	8.95	1.9	4.3	LAKEFORK BASIN SNOTE 1	10900	1/01	•	15.05	10.0	9.6
DANIELS-STRAWBERRY S	8000	1/01	ı	16.28	3.3	7.3	LAKEFORK MOUNTAIN #3	8400				t	•
DESERET PEAK	9250				ı	1	LAMBS CANYON	7400	1/02	41	12.5	4.6	7 3
DESERET PEAK AM	9250				1	r	LASAL MOUNTAIN LOWER	8800				1.0	ı
DESERET PEAK SNOTEL	9250	1/01	1	10.78	5.0	7.7	LASAL MOUNTAIN SNOTE	9850	1/01		6.18	1,2	5.6
DILL'S CAMP SNOTEL	9200	1/01		10.38	4.3	6.2	LILY LAKE SNOTEL	9050	1/01		10.05	6.2	6.2
DONKEY RESERVOIR SNO	9800	1/01	•	80.9	1.4	3.7	LITTLE BEAR LOWER	0009					1

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	I.AST	AVERAGE	
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90	
LITTLE BEAR SNOTEL	6550	1/01	ı	13.85	1.0	9.9	THISTLE FLAT	8500				,	ı	
LITTLE GRASSY SNOTEL	6100	1/01	ı	2.18	0.1	1.1	TIMBERLINE	9100						
LONG FLAT SNOTEL	8000	1/01	ı	1.68	9.0	3.5	TIMPANOGOS DIVIDE SN	8140	1/07	1	20.28	4.1	9.4	
LONG VALLEY JCT. SNT	7500	1/01	1	2.38	0.1	1.2	TONY GROVE LK SNOTEL	8400	1/01	1	30.95	18.6	14.5	
LOOKOUT PEAK SNOTEL	8200	1/01	,	20.15	7.6	12.7	TONY GROVE R.S.	6250				•		
LOST CREEK RESERVOIR	6130				,	1	TRIAL LAKE	0966				1	:	
MAMMOTH-COTTONWD SNT	8800	1/01	ı	15.25	4.7	7.4	TRIAL LAKE SNOTEL	0966	1/01	1	20.48	9.6	10.8	
MERCHANT VALLEY SNOT	8750	1/01	j	8.45	2.4	5.5	TROUT CREEK SNOTEL	9400	1/01		6.18	8.0	4.5	
MIDDLE CANYON	7000				•	ı	UPPER JOES VALLEY	8900				1	•	
MIDWAY VALLEY SNOTEL	9800	1/01	ı	10.98	2.1	10.0	VERNON CREEK SNOTEL	7500	1/01	ı	7.18	1.3	4.3	
MILL CREEK	0569	1/02	38	12.4	3.5	0.6	VI PONT	0.00				ı	1	
MILL-D NORTH SNOTEL	8960	1/01	1	18.25	7.6	10.1	WEBSTER FLAT SNOTEL	9200	1/01		5.48	1.8	7.0	
MILL-D SOUTH FORK	7400	1/03	45	1.4	4.0	8.4	WHITE RIVER #1 SNOTE	8550	1/01	1	12.25	4.5	5.6	
MINING FORK SNOTEL	8000	1/01	ı	12.4S	3.8	6.1	WHITE RIVER #3	7400					1	
MONTE CRISTO SNOTEL	8960	1/01	1	23.48	11.5	11.0	WIDISOE #3 SNOTEL	9500	1/01	•	6.48	6.0	4.5	
MOSBY MIN. SNOTEL	9500	1/01	1	11.48	6.0	4.5	WRIGLEY CREEK	0006					1	
MI.BALDY R.S.	9500				ı		YANKEE RESERVOIR	8700				;	1	
MUD CREEK #2	8600				ı		NOTE:							
OAK CREEK	1760				1		The S flag following Water Content for SNOTEL	Vater Co	ontent fo	r SNOTEI	, sites ind	icates	sites indicates telemetered	~1
PANQUITCH LAKE	8200				1		data. The Depth reading preceeding S flagged data was measured around the	ing pred	seeding S	flagged	data was	measurc	d around th	2
PARLEY'S CANYON SNOT	7500	1/01	,	8.95	4.5	8.2	snow pillows at the time of the ground survey and may not be the same date	ime of t	the groun	id survey	and may n	ot be t	he same dat	e e
PARLEY'S CANYON SUM.	7500	1/02	42	12.7	4.4	8.1	the telemetered value.							
PAYSON R.S. SNOTEL	8050	1/01	ŀ	7.85	3.7	7.9								
PICKLE KEG SNOTEL	0096	1/01		7.75	3.6	6.7								
PINE CREEK SNOTEL	8800	1/01	ı	12.45	4.2	7.7								
RED PINE RIDGE SNOTE	9200	1/01		9.28	5.1	7.5								
REDDEN MINE LOWER	8500				•	1								
REES'S FLAT	7300					ι								
ROCK CREEK SNOTEL	7900	1/01		9.98	2.1	4.1								
ROCKY BN-SETTLEMT SN	8900	1/01	1	15.68	4.2	11.8								
SEELEY CREEK SNOTEL 1	10000	1/01		9.98	4.7	7.1								
SILVER LAKE (BRIGHT.)	8730	12/27	73	20.7	7.0	10.6								
SMITH MOREHOUSE SNTL	1600	1/01	ı	9.58	4.6	5.8								
SNOWBIRD SNOTEL	9700	1/01	ı	21.38	11.4	15.0								
SPIRIT LAKE	10300					ı								
SQUAW SPRINGS	9300				1	•								
STEEL CREEK PARK SNO 1	10100	1/01	•	8.45	7.1	7.2								
STILLWATER CAMP	8550				1	ı								
STRAWBERRY DIVIDE SN	8400	1/01	ı	16.58	4.9	8.0								
STUART R.S.	7950				1									
SUSC RANCH	8200					ı								
TALL POLES	8800					1								
THAYNES CANYON SNOTL	9200	1/01	t	16.68	0.6	7.9								

SP

### UTAH SURFACE WATER SUPPLY INDEX

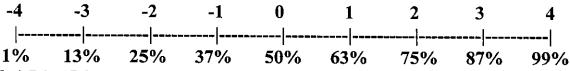
NRCS SNOW SURVEYS - As of Jan 1, 1997

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero indicating a median water supply as compared to historical analysis.

SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage alone. The SWSI index allows comparison of water availability between basins/regions for drought or flood severity analysis.

Basin or Region	SWSI/% Value	Most Recent Year With Similar SWSI Value	Agricultural Water Shortage May Occur if SWSI less than
Bear River	1.96/74%	75,67,74,82	-3.8
Ogden River	2.90/85%	82,69,80,83	
Weber River	1.67/70%	78,95,82,74	
Tooele Valley	NA		
Provo	NA		
North Slope	NA		
West Uintah Basin	3.57/93	86,87,95	
East Uintah Basin	2.41/79%	84,87,86,95	
Price River	2.08/75%	95,71,58,68,75	
San Rafael	2.50/80%	75,73,80,86	
Moab	0.00/50%	92,94,86,85	
Upper Sevier River	0.91/61%	81,94,87,68	
Lower Sevier River	NA		
Beaver River	0.69/58%	81,74,70,87	
Virgin River	2.38/79%	88,92,95,93	

### SWSI SCALE AND PERCENT CHANCE OF NON-EXCEEDANCE



Much Below Below Normal Near Normal Water Supply Conditions Above Normal Much Above

The percent chance of non-exceedance is a probability that can be best thought of as a simple scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and 50 representing average conditions. Each SWSI unit represents about 12% of historical occurences scaled between -4 and + 4, comparable to the Palmer Drought Index. Normal water supply conditions comprise the middle third (33%) of the scale with dry and wet categories occupying a third (33%) at each end of the spectrum.

Many agencies contribute data to calculate SWSI values: National Weather Service, Bureau of Reclamation, Utah State Water Resources and many private Corporations and Individuals.

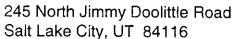
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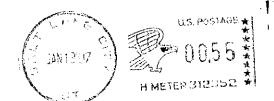
Issued by

Paul W. Johnson Chief Natural Resources Conservation Service U.S. Department of Agriculture Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah









# Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT





Natural Resources Conservation Service

# Utah Basin Outlook Report February 1, 1997



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# **Basin Outlook Reports**

## and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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### How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C., 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

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### STATE OF UTAH GENERAL OUTLOOK Feb. 1, 1997

### **SUMMARY**

January was, by any and all measures, a phenomenal climatic month across the State of Utah. Snowpack accumulation continues at a record pace with many basins near 200% of average. Even the Virgin, the lowest snowpack in the state is much above average at 145% of normal, a fantastic snowpack in any year, but this year it becomes almost a footnote. Watersheds in southern and southeastern Utah have 3 to 7 times more snow this year than last. All watersheds except the Sevier and southwest Utah have record February 1 snowpacks, and are well above their normal April first values already. Given average snowpack accumulations during February and March in northern Utah, these snowpacks will exceed the historical maximum for April 1, traditionally the peak snowpack month. Precipitation across Utah's mountains ranged from 180% to 224% of average. Warm storms have brought snow to the mountains and oftentimes rain to the valleys. This rain has greatly increased soil moisture over much of Utah. Water supply conditions are excellent across the entire state. Streams should have high flows that last well into the summer months. Reservoirs should easily fill, even Bear Lake and Strawberry should see much higher levels than those of the past ten years. Given the extraordinary snowpacks on the Bear, Weber, Utah Lake, Uintah Basin, Price, and Southeast Utah there is an increasing potential for agricultural inundation this spring. Those areas prone to agricultural flooding are likely to experience it again this season. Future climatic conditions will determine the potential and extent of any inundation.

### **SNOWPACK**

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 186% of normal, about 2 times those of last year. Snowpacks in the north are much above average ranging from 180% to 200% of normal. In the south, snowpacks range from 145% to 200% of average. In southeastern Utah, an area hard hit by drought last year, snowpacks range from 130% to 260 % of average, 2 to 7 times as much as last year. These are the highest February 1 snowpacks ever with the exception of the Sevier and southwest Utah. All areas except the Sevier and southwest Utah have already exceeded their average April 1 peak, some by as much as 25%, with 40% of the accumulation season remaining.

### **PRECIPITATION**

Mountain precipitation in January, as measured by the NRCS SNOTEL system was a phenomenal 196% of average statewide, a fairly rare occurrence, especially considering that December had 220% of average. This brings the seasonal accumulation (Oct-Jan) to 169% of average. Precipitation distribution was fairly even across the state with most areas near 200% of normal.

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National Weather Service precipitation figures range from 150% to 250% of average with northern Utah as the wettest area of the state. The winter storms originated from a southwesterly storm track which typically carry a higher moisture content and warmer than normal temperatures. Some stations with the highest precipitation totals include: Capital Reef - 403%, Hanksville - 442% and Monticello with 372% of average.

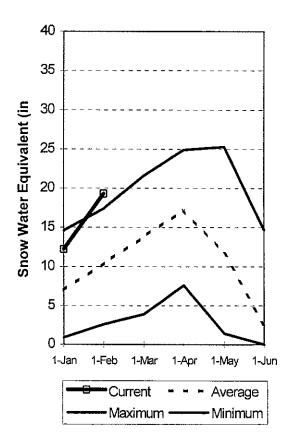
### RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 75% of capacity. Many reservoirs are releasing water in expectation of high flows.

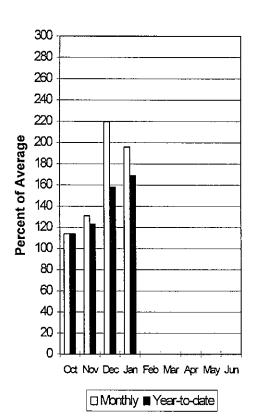
### **STREAMFLOW**

Streamflow forecasts for snowmelt runoff range from above average to near record levels throughout Utah. In the north, much above average to near record conditions prevail whereas in the south, above normal streamflow is expected. Streamflows across the state could have much higher peak flows and longer duration than normal. There is a significant potential, given even average conditions the remainder of the snowpack accumulation season, for some agricultural inundation in almost all areas of the state.





### Precipitation



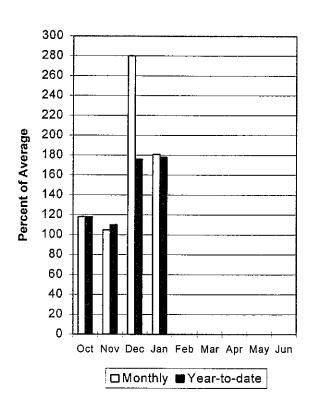
### Bear River Basin Feb 1, 1997

Snowpack on the Bear River Basin is much above average at 200% of normal, ranging from 137% to 263% at specific sites. This is the highest February 1 snowpack on the Bear ever. Assuming average snowpack accumulation from here on, the Bear River Watershed would be at 157% on April first, a new record high. January precipitation was phenomenal at 181%, which brings the seasonal accumulation (Oct-Jan) to 178% of average. Water supply conditions are excellent and much above average runoff is expected with high potential for agricultural innundation. Reservoir storage is at 65% capacity.

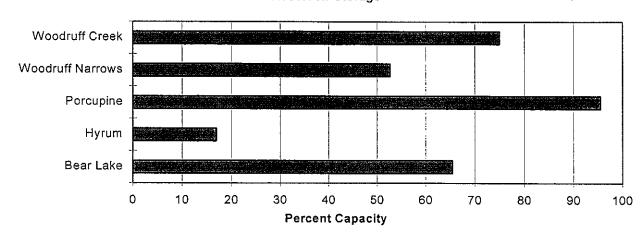
### Mountain Snowpack

## 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Mar 1-May Current Average Maximum Minimum

### Precipitation



### Reservoir Storage



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# BEAR RIVER BASIN Streamflow Forecasts - February 1, 1997

			=========	=========			========	
		<<=====	Drier ====	== Future C	onditions =:	===== Wetter	====>>	l
		[						•
Forecast Point	Forecast	=======	========	= Chance Of	Exceeding * :	=========	======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
	22255555	========	===========	==========	=============	========	=======	=======================================
BEAR R nr UT-WY State Line	APR-JUL	123	149	170	148	194	234	115
BEAR R nr Woodruff (2)	APR-JUL	119	182	225	151	268	331	149
BIG CK nr Randolph	APR-JUL	2.75	4.98	6.50	171	8.02	10.25	3.80
BEAR R nr Randolph, UT	APR-JUL	112	155	1 405	457	045	252	4
• •		–	155	185	157	215	258	118
SMITHS FORK or Border, WY	APR-JUL	139	157	170	167	183	201	102
THOMAS FK nr WY-ID State Line	APR-JUL	33	48	62	188	80	115	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	354	417	l i 460	160	503	566	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	12.7	16.6	20	164	24	32	12.2
CUB R nr Preston	APR-JUL	57	65	71	151	77	85	47
				İ				
LOGAN R nr Logan	APR-JUL	133	172	205	192	244	316	107
BLACKSMITH Fk or Hyrum	APR-JUL	67	87	103	191	123	159	54
#======================================	========	========	=========		===== <b>====</b> =	<b></b>		

BEAR RIVER BASIN	BEAR RIVER BASIN					
Reservoir Storage (1000 AF) - End of January	Watershed Snowpack Analysis - February 1, 1997					

Reservoir	Usable   Capacîty  	*** Usa This Year	ble Stora Last Year	ge ***       Avg	Watershed	Number of Data Sites	This Yea	r as % of ======= Average
	=========		********	======				
BEAR LAKE	1421.0	929.5	591.8	987.6	BEAR RIVER, UPPER (abv	'На 6	132	188
HYRUM	15.3	2.6	11.2	10.3	BEAR RIVER, LOWER (blw	На 7	169	213
PORCUP I NE	11.3	10.8	9.6	2.9	LOGAN RIVER	4	167	226
WOODRUFF NARROWS	57.3	30.2	44.0		RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	3.0	3.2	j	BEAR RIVER BASIN	13	152	203
=== <b>===============</b> ==================	=========	=======	=======	<b>==</b> =====				=======

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

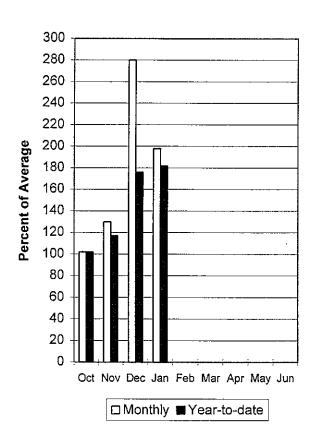
## Weber and Ogden River Basins Feb 1, 1997

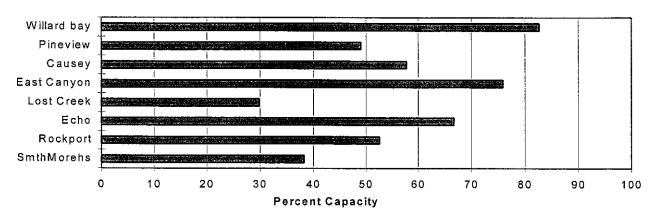
Snowpack on the Weber and Ogden Watersheds is at 200% of average. Individual sites range from 153% to 246 % of average. This is the highest February 1 snowpack on the Weber ever. Precipitation during January was phenomenal at 198% of average, bringing the seasonal accumulation (Oct-Jan) to 182% of normal. Reservoir storage on the Weber system is at 67% of capacity. General water supply conditions are excellent with the prospect of having much above average runoff this spring. Streamflows could have much higher peaks and longer duration than normal, with high potential for agricultural inundation.

#### **Mountain Snowpack**

## 40 35 30 Snow Water Equivalent (in) 25 20 15 10 5 0 1-Feb 1-Jan 1-Mar 1-Apr 1-May Current Average Maximum Minimum

## Precipitation





#### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - February 1, 1997

		========	========		==========		=========	=========
		<<======	Drier ====	== Future C	onditions ==	===== Wetter	====>>	
Forecast Point	Forecast	=======	=========	= Chance Of	Exceeding * =		=======================================	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	======================================	45	=====================================	167	=== <del>====</del> =============================	62	30
WEBER R nr Oakley	APR-JUL	144	165	180	148	195	216	122
ROCKPORT RESERVIR inflow	APR-JUL	155	185	205	153	225	255	134
CHALK CK at Coalville, Ut	APR-JUL	48	64	   75	171	   86	102	44
WEBER R nr Coalville, Ut	APR-JUL	158	189	210	154	231	262	136
ECHO RESEROIR Inflow	APR-JUL	205	250	280	159	310	355	176
LOST CK Res Inflow	APR-JUL	16.1	24	   29	169	34	42	17.2
E CANYON CK nr Morgan	APR-JUL	32	41	46	15 <b>3</b>	52	60	30
WEBER R at Gateway	APR-JUL	451	492	520	150	548	589	347
S FORK OGDEN R nr Huntsville	APR-JUL	80	95	   105	167 }	115	130	63
PINEVIEW RESEROIR Inflow	APR-JUL	152	186	210	169	234	268	124
WHEELER CK nr Huntsville	APR-JUL	9.66	11.05	12.00	194	12.95	14.34	6.20

WEBER & OGDEN WATERSHEDS in Utah Reservoir Storage (1000 AF) - End of January WEBER & OGDEN WATERSHEDS in Utah Watershed Snowpack Analysis - February 1, 1997

Reservoir	Usable   Capacity	*** Usa This	*** Usable Storage * This Last		Watershed	Number of	This Yea	This Year as % of	
	1	Year	Year	A∨g		Data Sites	Last Yr	Average	
CAUSEY	7.1	4.1	4.2	2.2	OGDEN RIVER	4	186	216	
EAST CANYON	49.5	37.6	42.2	34.7	WEBER RIVER	8	149	193	
ЕСНО	73.9	49.3	56.1	45.8	WEBER & OGDEN WATERSHE	DS 12	163	202	
LOST CREEK	22.5	6.7	16.7	13.1					
PINEVIEW	110.1	54.0	67.3	49.6					
ROCKPORT	60.9	32.0	44.3	31.9					
WILLARD BAY	215.0	177.8	174.7	110.6					
=======================================		:=== <b>==</b> =	========						

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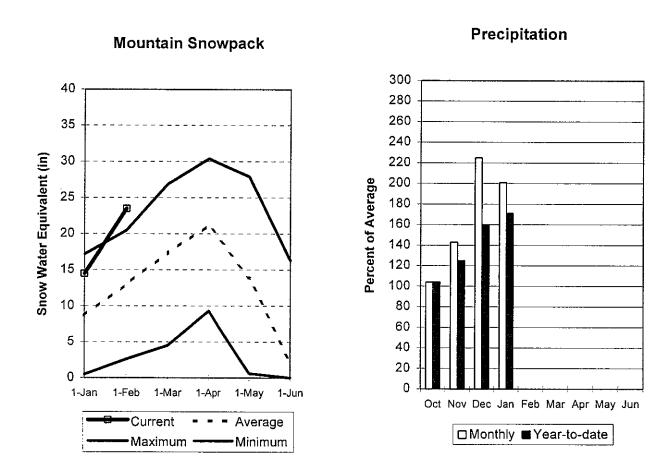
- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

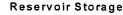
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

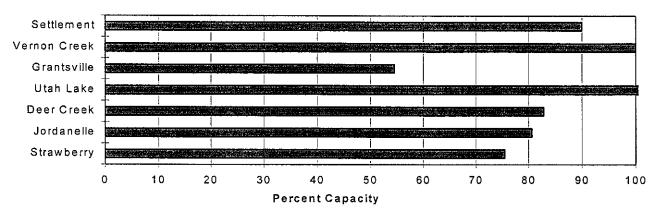
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## Utah Lake, Jordan River & Tooele Valley Basins Feb 1, 1997

Snowpacks over these watersheds are much above average at 181% of normal, the highest Feb 1 snowpack ever. Individual sites range from 50% to 220% of average. Precipitation during January was much above average at 201% of normal, bringing the seasonal accumulation (Oct-Jan) to 171% of average. Reservoir storage is at 86% of capacity. Water supply conditions are much above average and much above average peak flows, with longer flow durations, can be expected. There is potential for agricultural inundation.







# UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - February 1, 1997

		<<=====	Drier ====	== Future C	onditions ==	===== Wetter	· ====>>	3========
Forecast Point	Forecast	   =======	.222220000	= Chance Of	Exceeding * =		 	
	Period	90%	70%	_	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
PAYSON CK nr Payson	APR-JUL	 1.76	4.07	=====================================	118	=========   6.33	8.89	4.40
SPANISH FORK or Castilla	APR-JUL	51	92	116	157	140	181	74
HOBBLE CK nr Springville	APR-JUL	19.0	26	29	154	32	39	18.8
PROVO R nr Hailstone	APR-JUL	116	0.0	!   157	144	0,0	198	109
PROVO R below Deer Creek Dam	APR-JUL	120	0.0	188	147	0.0	256	128
AMERICAN FORK nr American Fk.	APR-JUL	39	46	50	156	54	61	32
UTAH LAKE inflow	APR-JUL	301	0.0	l   490	151 Ì	   0.0	680	324
L COTTONWOOD CRK or SLC	APR-JUL	43	50	54	139	58	65	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	46	53	57	150	61	68	38
PARLEY'S CK nr SLC	APR-JUL	10.0	16.2	   20	126	24	30	15.9
MILL CK nr SLC	APR-JUL	5.01	6.89	8.10	125	9.31	11.51	6.50
DELL FK nr SLC	APR-JUL	5.04	7.88	9.50	134	11.12	14.20	7.10
EMIGRATION CK nr SLC	APR-JUL	0.80	3.09	l 4.50	107	5.91	8.19	4.20
CITY CK nr SLC	APR-JUL	5.39	8.19	9.90	119	11.61	14.36	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	1317	1882	2400	179	3060	4373	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	1242	2342	3600	157	5534	10433	2300
S WILLOW CK nr Grantsville	APR-JUL	2.24	3.65	4.60	148	5.55	6.96	3.10
UTAH LAKE, JORDAN R					UTAH LAKE,	JORDAN RIVER	& TOOELE VA	LLEY
Reservoir Storage (1000		-		[	Watershed Sn	nowpack Analys	is - Februa	гу 1, 1997
	Usable		e Storage *	**		Numbe	 r This	Year as % of
Reservoir	Capacity	This	Last	Water	rshed	of	=====	
		Year	Year Av	/g   	. <b></b>	Data Si		Yr Average

=======================================										
Reservoir	Usable   Capacity	*** Usa This	*** Usable Storage *** This Last		Watershed	Number of	This Year as % of			
		Year	Year	A∨g		ta Sites	Last Yr	Average		
*======================================				======= :		=======	========	=======		
DEER CREEK	149.7	124.0	133.1	94.3	PROVO RIVER & UTAH LAKE	7	180	195		
GRANTSVILLE	3.3	1.8	2.7		PROVO RIVER	4	178	208		
SETTLEMENT CREEK	1.0	0.9	0.8	0.5	JORDAN RIVER & GREAT SALT	5	138	164		
STRAWBERRY-ENLARGED	1105.9	835.3	673.6		TOOELE VALLEY WATERSHEDS	4	208	186		
UTAH LAKE	870.9	892.3	869.6	648.6	UTAH LAKE, JORDAN RIVER &	16	166	181		
VERNON CREEK	0.6	0.6	0.6							
=======================================					=======================================		==== <b>==</b> ==			

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

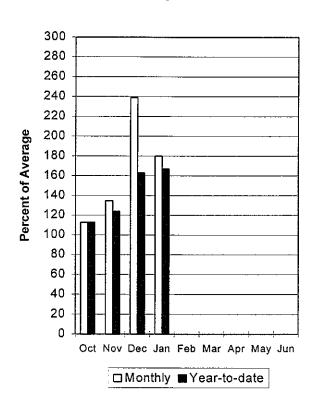
## Uintah Basin and Dagget SCD's Feb 1, 1997

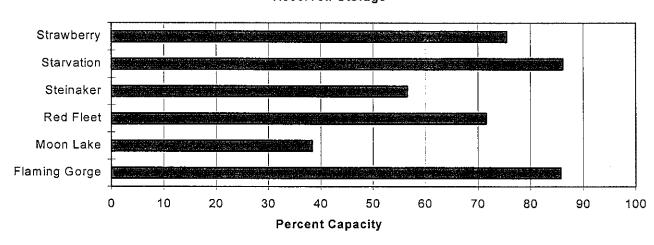
Snowpacks across the Uintah Basin and North Slope areas are somewhat divided with a north to south split. The north is above to much above average at 156% and the southern area is higher yet, near 202% of average. This is the highest Feb I snowpack ever. Precipitation during January was much above average, nearly 180%, bringing the seasonal accumulation (Oct-Jan) to 167% of average. Reservoir storage is at 74% of capacity. General water supply conditions are excellent and much above average streamflow can be expected, along with much higher peak flows and high potential for agricultural inundation.

#### Mountain Snowpack

## 40 35 Snow Water Equivalent (in) 30 25 20 15 10 ( 5 1-Feb 1-Mar 1-May Current Average Maximum Minimum

### Precipitation





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# UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - February 1, 1997

<<===== Drier ====== Future Conditions ====== Wetter ====>> Forecast Point Forecast | Period 90% 70% 50% (Most Probable) 30% 10% 30-Yr Avg. (1000AF) (% AVG.) | (1000AF) (1000AF) (1000AF) (1000AF) | (1000AF) MEEKS CABIN RESERVOIR Inflow APR-JUL STATE LINE RESERVOIR INFLOW APR-JUL HENRYS FORK or Manila APR-JUL FLAMING GORGE RES INFLOW APR-JUL BIG BRUSH CK abv Red Fleet Resv APR-JUL 19.8 19.8 ASHLEY CK nr Vernal APR-JUL ี่สถ WF DUCHESNE RIVER or Hanna APR-JUL DUCHESNE R nr Tabiona APR-JUL ROCK CK nr Mountain Home APR-JUL UPPER STILLWATER RESV inflow APR-JUL DUCKESNE R abv Knight Diversion APR-JUL STRAWBERRY RES nr Soldier Springs APR-JUL CURRANT CREEK RESV Inflow APR-JUL STARVATION RESERVOIR inflow APR-JUL MOON LAKE Inflow APR-JUL YELLOWSTONE R nr Altonah APR-JUL DUCKESNE R at Myton APR-JUL WHITEROCKS R nr Whiterocks APR-JUL UINTA R nr Neola APR-JUL DUCHESNE R nr Randlett APR-JUL 

	UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of January						UINTAH BASIN & DAGGET SCD'S				
keservoit Storage (10	JO AF) - ENC	of Janua	ary	l	Watershed Snowpack Analysis - February 1, 1997						
Reservoir	Usable   Capacity		*** Usable Storage ***   This Last		Watershed	Number of	This Year as % of				
		Year	Year	Avg	Da	ta Sites	Last Yr	Average			
		•••======	==== <b>==</b>		***********			========			
FLAMING GORGE	3749.0	3215.6	3230.9	j	UPPER GREEN RIVER in UTAH	6	152	156			
MOON LAKE	49.5	19.0	25.6	29.1	ASHLEY CREEK	2	348	170			
RED FLEET	25.7	18.4	20.5		BLACK'S FORK RIVER	2	96	139			
STEINAKER	33.4	18.9	28.9	19.7	SHEEP CREEK	1	226	149			
STARVATION	165.3	142.4	143.0	113.0	DUCHESNE RIVER	11	181	202			
STRAWBERRY-ENLARGED	1105.9	835.3	673.6	[	LAKE FORK-YELLOWSTONE CRE	4	146	181			
				Ī	STRAWBERRY RIVER	4	189	214			
				1	UINTAH-WHITEROCKS RIVERS	2	328	209			
				Ì	UINTAH BASIN & DAGGET SCD	17	174	190			
		.======		=======		======		=======			

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

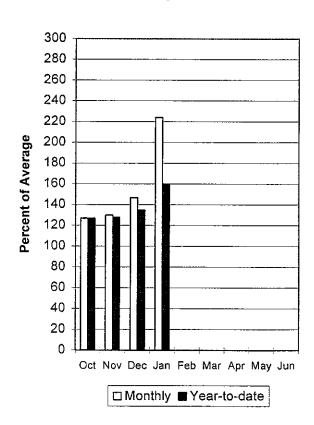
# Carbon, Emery, Wayne, Grand and San Juan Co. Feb 1, 1997

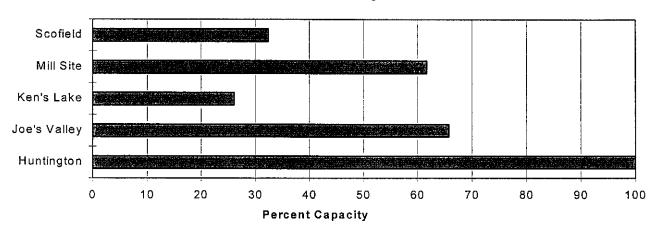
Snowpacks in this region are at 195% of average. The Blue Mountains, have 7 times more snow than last year. Individual sites range from 147% to 263% of normal. This is the highest Feb 1 snowpack ever. Precipitation during January was much above average at 224%, bringing the seasonal accumulation (Oct-Jan) to 160% of normal. Reservoir storage is at 51% of capacity. General water supply conditions are much above average throughout the region and above average flows are expected. These conditions should help alleviate the extreme drought experienced in this area the past year. Agricultural inundation is possible.

#### **Mountain Snowpack**

## 40 35 30 Snow Water Equivalent (in) 25 20 15 10 5 1-Jan 1-Feb 1-Mar 1-May Current Average Maximum Minimum

#### Precipitation





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#### CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - February 1, 1997

		=========	========	2222222222	=========	=========	=======================================	=========
		<<=====	Drier ====	== Future C	onditions ==	===== Wette	~ ====>>	
Forecast Point	Forecast		=======================================	- Characa 04 (			[	
TOTCOSC FOTILE		!			Exceeding * =:		ı	
	Period	90%	70%		Probable)	30%	10%	30-Yr Avg.
=======================================		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	14.5	18.0	=== <del>======</del>   20	:    171	======================================	26	11.7
SCOFIELD RESV Inflow	APR-JUL	37	69	l 75	171	81	113	44
WHITE R blw Tabbyune Ck	APR-JUL	22	28	32	171	36	42	
miria k ata rasayaka ak	Ark doc	44	20	; J2 	171 ]	30	42	18.7
GREEN R at Green River, UT	APR-JUL	4222	4978	   5400	171	5822	6586	3151
ELECTRIC LAKE inflow	APR-JUL	24	27	29	192	31	35	15.1
HUNTINGTON CK nr Huntington	APR-JUL	51	68	75	183	82	99	41
JOE'S VALLEY RESV Inflow	APR-JUL	60	75	   85	160	95	110	53
FERRON CK nr Ferron	APR-JUL	59	68	75	192	82	91	39
COLORADO R nr Cisco	APR-JUL	5000	6112	6720	163	7328	8471	4132
MILL CK at Sheley Tunnel	APR-JUL	5.42	7.80	   10.00	167	12.81	18.46	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	7.01	9.98	12.00	185	14.02	16.99	6.50
MUDDY CK nr Emery	APR-JUL	26	30	35	179	40	44	19.6
•				, 22 		40	44	17.0
LLOYD'S RESERVOIR inflow	MAR-JUL	2.43	6.05	8.50	293	10.95	14.57	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	9.04	12.40	15.00	375	17.84	22.47	4.00
SAN JUAN R nr Bluff	APR-JUL	1325	1709	1935	168	2161	2557	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of January

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - February 1, 1997

Reservoir	Usable   Capacity	*** Usa This	ble Storag	ge ***	Watershed	Number of	This Yea	r as % of
	1	Year	Year	Avg	D	ata Sites	Last Yr	Average
HUNTINGTON NORTH	4.2	4.2	3.8	   2.3	PRICE RIVER	======== 3	<del></del> 191	214
JOE'S VALLEY	61.6	40.5	44.4	43.6	SAN RAFAEL RIVER	3	152	183
KEN'S LAKE	2.3	0.6	1.8	j	MUDDY CREEK	1	168	192
MILL SITE	16.7	10.3	12.7	3.5	FREMONT RIVER	3	322	189
SCOFIELD	65.8	21.3	30.7	31.3	LASAL MOUNTAINS	1	173	132
				1	BLUE MOUNTAINS	1	700	263
				1	WILLOW CREEK	1	326	179
					CARBON, EMERY, WAYNE, GR	A 13	203	195

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

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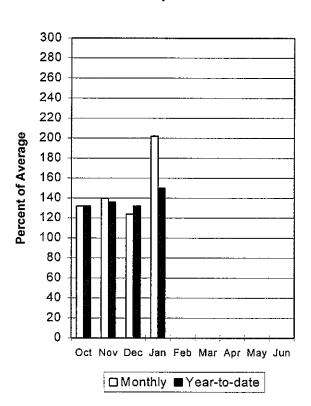
## Sevier and Beaver River Basins Feb 1, 1997

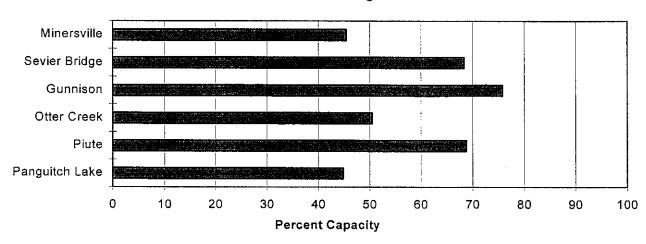
Snowpacks on the Sevier River Basin are at 161% of average, up 30% from last month. They are double those of last year. This basin is close to a record high Feb 1 snowpack and is the highest since 1993. Individual sites range from 120% to 215% of average. Precipitation during January was 202% of normal, bringing the seasonal accumulation (Oct-Jan) to 150% of average. Reservoir storage is at 65% of capacity. General water supply conditions are above to much above average and streamflows should be much higher and of longer duration than last year. There is some potential for agricultural inundation.

### Mountain Snowpack

## 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Mar 1-Apr 1-May Current Average Maximum Minimum

#### Precipitation





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# SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - February 1, 1997

		=========			=========	=========	========	
		<<======	Drier ====	== Future C	onditions ==:	===== Wetter	====>>	
Forecast Point	Forecast	=======	:=====================================	= Chance Of :	Exceeding * =:		=======	
	Period	90%	70%		Probable)	30%	10% l	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SEVIER R at Hatch	APR-JUL	========= 38	57	67	: =========   124	<b>7</b> 7	96	======================================
SEVIER R nr Circleville	APR-JUL	58	78	92	123	106	126	75
SEVIER R nr Kingston	APR-JUL	59	83	97	117	111	135	83
ANTIMONY CK nr Antimony	APR-JUL	6.51	8.38	9.40	127	10.42	12.58	7.40
E F SEVIER R nr Kingston	APR-JUL	17.1	33	43	143	53	69	30
SEVIER R blw Piute Dam	APR-JUL	61	0.0	129	112	0.0	197	115
CLEAR CK nr Sevier	APR-JUL	14.1	22	[   27	129	32	40	21
SALINA CK at Salina	APR-JUL	0.5	9.4	18.5	105	28	44	17.6
PLEASANT CK nr Pleasant	APR-JUL	8.67	10.47	11.50	135	12.53	14.53	8.50
EPHRAIM CK nr Ephraim	APR-JUL	9.5	13.1	I   15.1	120	17.1	21	12.6
SEVIER R nr Gunnison	APR-JUL	55	201	275	115	349	495	239
CHICKEN CK nr Levan	APR-JUL	5.26	6.30	7.00	149	7.70	8.74	4.70
OAK CK nr Oak City	APR-JUL	0.68	1.76	2.50	147	3.24	4.32	1.70
BEAVER R nr Beaver	APR-JUL	20	33	41	158	49	62	26
MINERSVILLE RESERGIR inflow	APR-JUL	14.2	22	28	168	34	42	16.7

	& BEAVER RIVER BA		ıry	[	SEVIER & BEAVE Watershed Snowpack A			1, 1997
Reservoir	Usable   Capacity	*** Usa This Year	ble Stora Last Year	ge ***       Avg	Watershed	Number of ta Sites	,,,,,	r as % of ======= Average
GUNN I SON	20.3	15.4	20.3	: =======   11.7	LIANCE CEVIER BIVER (	======= 7	200	450
MINERSVILLE (RkyFd)	23.3	10.6	20.5	11.2	UPPER SEVIER RIVER (south EAST FORK SEVIER RIVER	7 2	298 260	159 176
OTTER CREEK	52.5	26.5	51.0	27.5	SOUTH FORK SEVIER RIVER	5	317	153
PIUTE	71.8	49.4	62.0	36.9	LOWER SEVIER RIVER (inclu	6	155	150
SEVIER BRIDGE	236.0	161.3	234.0	101.1	BEAVER RIVER	2	223	205
PANGUITCH LAKE	22.3	10.0	19.8	j	SEVIER & BEAVER RIVER BAS	15	205	161

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

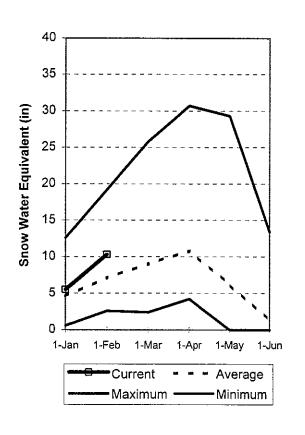
<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

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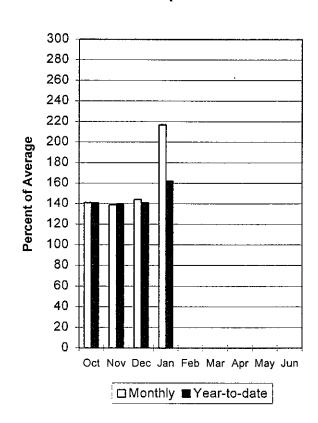
# E. Garfield, Kane, Washington, & Iron co. Feb 1, 1997

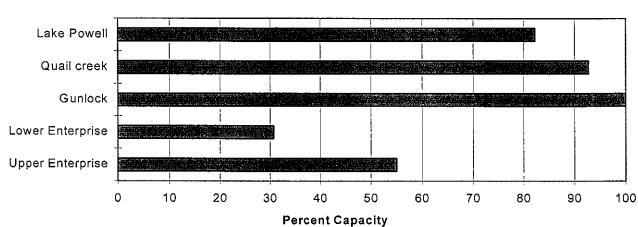
Snowpacks in this region are much above normal at 145% of average, about 4 times that of last year. This is the lowest snowpack in the state, and in any other year would be considered outstanding. This snowpack should produce excellent water supply this spring. Precipitation during January was much above average at 217%, bringing the seasonal accumulation (Oct-Jan) to 162% of normal. Recent rains have replenished soil moisture deficits and general water supply conditions are much above average. Reservoir storage is at 85% of capacity. This area has some potential for agricultural inundation.

#### **Mountain Snowpack**



#### Precipitation





E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - February 1, 1997

=======================================		=========	=======================================	=========	========		========	==========
		<<====================================	Drier ====	≕≕ Future C	onditions :	====== Wetter	====>>	
Forecast Point	Forecast	   =======	=========	= Chance Of i	Exceeding *	======================================	  -=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=======================================	=======================================	22 <b>2222</b>	=======	=========	========	= ========		======================================
COAL CK nr Cedar City	APR-JUL	10.0	17.6	22	117	26	34	18.8
LAKE POWELL INFLOW	APR-JUL	9978		13200	1 <i>7</i> 1	i	16398	7735
VIRGIN R or Hurricane	APR-JUL	19.8		120	152	j	180	79
SANTA CLARA R nr Pine Valley	APR-JUL	1.01		8.00	151	j	15.00	5.30
2372233 <b>5373232</b> 323233333333333333333					========			=======================================

Reservoir Storage (1	000 AF) - En	d of Janu	ary	İ	Watershed Snowpack	Analysis -	February '	I, 1997
Reservoir	Usable Capacity	This	able Stora Last		Watershed	Number of	This Year	as % of
		Year ====================================	Year	Avg		ata Sites	Last Yr	Average
GUNLOCK	10.4	10.4	9.8		VIRGIN RIVER	5	393	143
LAKE POWELL	24322.0	19991.0	20946.0		PAROWAN	2	367	150
QUAIL CREEK	40.0	37.1	29.4		ENTERPRISE TO NEW HARMON	IY 2	377	105
UPPER ENTERPRISE	10.0	5.5	7.4		COAL CREEK	2	327	125
LOWER ENTERPRISE	2.6	0.8	0.0		ESCALANTE RIVER	2	410	180

E. GARFIELD, KANE, WASHINGTON, & IRON Co.

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E. GARFIELD, KANE, WASHIN 9

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.

SNOW COURSE DATA FOR THE STATE OF UTAH As of FEBRUARY 1, 1997

B900   2/01   - 7.35   2.8   196     B800   1/28   111   37.9   25.6   2     B800   2/01   - 7.35   2.8     B800   2/01   - 9.55   7.9     B800   2/01   - 9.55   7.9     B800   2/01   - 15.28   12.3     B800   2/01   - 19.55   9.0     B930   2/01   - 19.55   9.0     B930   2/01   - 19.55   9.0     B930   2/01   - 12.35   5.2     B800   2/01   - 12.35   12.7     B800   2/01   - 19.58   12.7     B800   2/01   - 19.58   12.7     B800   2/01   - 19.58   12.7     B800   2/01   - 19.58   12.7     B800   2/01   - 19.58   12.7     B800   2/01   - 19.58   12.7     B800   2/01   - 19.58   12.8     B800   2/01   - 10.58   8.8     B900   2/01   - 10.58   13.2     B900   2/01   - 10.58   10.8     B900   2/01   - 10.68     DBPTH 111 111	<u>4</u>	DRY BREAD POND SNOTL 8 DRY FORK SNOTEL 7 EAST SHINGLE LAKE 9 EAST WILLOW CREEK SN 8 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 FARMINGTON CANYON L. 6 GABLER C. HEADQUARTER 8 G.B.R.C. HEADQUARTER 8 G.B.R.C. MEADOWS 10 GARDEN CITY SUMMIT 7 GEORGE CREEK GOOSEBERRY R.S. 8	8350 2 7160 2 9800 8250 2 6950 2	D 2/01 2/01	DEPTH CO	CONTENT 27.9S 13.1S	XEAR 14.8 10.2	1961-97 12.5 -	
8900 2/01 - 7.35 2.8 8800 1/28 111 37.9 25.6 8280 2/01 - 9.55 7.9 8280 2/01 - 9.55 7.9 8280 2/01 - 15.28 12.3 6450 2/01 - 59.68 27.0 8340 2/01 - 19.55 9.0 8340 2/01 - 19.55 9.0 8450 2/01 - 12.35 5.2 9340 2/01 - 12.35 5.2 9800 2/01 - 12.35 5.2 9800 2/01 - 12.35 5.2 9800 2/01 - 24.45 16.9 9700 9700 2/01 - 12.35 5.2 9800 2/01 - 26.68 17.3 9800 2/01 - 26.68 17.3 9500 2/01 - 25.15 20.5 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 25.15 12.8 9500 2/01 - 13.25 5.9 9500 2/01 - 12.25 7.6 9500 2/01 - 12.25 7.6 9500 2/01 - 12.25 7.6 9500 2/01 - 12.25 7.6	111 3 111 - 1 1 - 2 1 - 1 1 - 1 15 - 1 15 - 1		1 4		2/01 2/01		27.9S	14.8	12.5
8800       1/28       111       37.9       25.6         10500       2/01       -       9.55       7.9         8000       2/01       -       9.55       7.9         6000       2/01       -       59.65       27.0         6450       2/01       -       59.65       27.0         10290       2/01       -       27.45       13.2         8100       2/01       -       19.55       9.0         8100       2/01       -       19.55       9.0         8100       2/01       -       19.55       9.0         8100       2/01       -       19.55       9.0         8100       2/01       -       19.55       9.0         8100       2/01       -       19.55       15.0         8100       2/01       -       19.58       17.3         9800       2/01       -       19.58       17.3         9800       2/01       -       19.58       17.3         9800       2/01       -       19.58       17.3         9800       2/01       -       17.08       9.2         10300       2/01	111		П н		2/01		13.18	10.2	i 1
10500 8000 2/01 - 9.5S 7.9 8000 2/01 - 15.2S 12.3 6450 1/01 - 19.5S 13.2 6450 1/0290 2/01 - 27.4S 13.2 - 28.00 8100 2/01 - 19.5S 9.0 8100 2/01 - 12.3S 5.2 - 89.0 8100 2/01 - 12.3S 7.8 8100 2/01 - 12.8S 7.8 8100 2/01 - 12.8S 7.8 8100 2/01 - 12.8S 7.8 8100 2/01 - 12.8S 7.8 8100 2/01 - 13.2S 2.7 8200 2/01 - 13.2S 2.7 8200 2/01 - 13.2S 2.9 8200 2/01 - 13.2S 8.8 8.8 8200 2/01 - 13.2S 8.8 88 8200 2/01 - 13.2S 8.8 88 8200 2/01 - 13.2S 8.8 88 8200 2/01 - 13.2S 8.8 88 8200 2/01 - 13.2S 8.8 88 8200 2/01 - 13.2S 8.8 88 8200 2/01 - 10.0S 8200	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 4						1
8000 2/01 - 9.55 7.9 8000 2/01 - 15.28 12.3 6450 2/01 - 59.65 27.0 6450 2/01 - 27.45 13.2 8100 2/01 - 27.45 13.2 8100 2/01 - 19.55 9.0 8100 2/01 - 12.35 5.2 9340 2/01 - 12.35 5.2 9300 2/01 - 12.85 7.8 8000 1/31 15 4.3 7.8 9000 2/01 - 12.85 7.8 9000 2/01 - 24.45 16.9 9000 2/01 - 12.85 7.8 8200 2/01 - 25.78 20.5 9200 2/01 - 17.0S 9.2 7500 2/01 - 25.78 20.5 9200 2/01 - 25.78 20.5 9200 2/01 - 17.58 8.8 8200 2/01 - 17.58 8.8 8200 2/01 - 25.18 12.8 8200 2/01 - 13.25 7.6 8200 2/01 - 25.18 12.8 8200 2/01 - 25.18 12.8 8200 2/01 - 25.18 12.8 8200 2/01 - 25.18 12.8 8200 2/01 - 25.18 13.2 8200 2/01 - 17.58 8.8 8200 2/01 - 17.58 8.8 8200 2/01 - 19.55 10.8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		т н					ı	
8280 2/01 - 15.28 12.3 6450 2/01 - 59.6S 27.0 6450 2/01 - 27.4S 13.2 8100 2/01 - 27.4S 13.2 8100 2/01 - 19.5S 9.0 8100 2/01 - 12.3S 5.2 9340 2/01 - 12.3S 7.8 8750 2/01 - 12.8S 7.8 8760 2/01 - 12.8S 7.8 8760 2/01 - 24.4S 16.9 9700 2/01 - 24.4S 16.9 9700 2/01 - 25.7S 20.5 9700 2/01 - 25.7S 20.5 9700 2/01 - 17.0S 9.2 7500 2/01 - 25.7S 20.5 9700 2/01 - 17.0S 9.2 7500 2/01 - 17.0S 9.2 7500 2/01 - 17.0S 9.2 7500 2/01 - 17.0S 9.2 7500 2/01 - 17.0S 9.2 7500 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		7 7		2/01	1	7.58	2.3	4.2
8000         2/01         -         59.6S         27.0           6450         2/01         -         27.4S         13.2           6450         2/01         -         27.4S         13.2           8100         2/01         -         19.5S         9.0           8100         2/01         -         12.3S         5.2           9800         2/01         -         12.3S         5.2           8700         1/30         92         27.8         20.4           8700         2/01         -         12.8S         7.8           10600         2/01         -         19.5S         15.0           8000         1/31         15         4.3         .7           8000         2/01         -         19.5S         15.0           9000         2/01         -         24.4S         16.9           9000         2/01         -         24.4S         16.9           9000         2/01         -         24.4S         16.9           9100         2/01         -         25.7S         20.4           9580         2/01         -         25.7S         20.5           <			н ч					1	ı
6450 6450 6450 10290 2/01			EL NO 1		2/01	- 4	41.18	21.6	17.4
6450 10290 2/01 - 19.5S 9.0 1 8100 8100 2/01 - 12.3S 5.2 9340 2/01 - 12.3S 5.2 93800 2/01 - 12.8S 7.8 10000 1/31 92 27.8 20.4 1 8750 2/01 - 24.4S 16.9 1 9700 1/30 92 27.8 20.4 1 9800 2/01 - 19.5S 12.7 1 9800 2/01 - 25.6S 17.3 1 9580 2/01 - 25.6S 17.3 1 9580 2/01 - 25.7S 20.5 1 10300 2/01 - 13.2S 5.9 7500 1/31 92 28.7 21.4 1 7500 2/01 - 25.1S 12.8 1 7500 2/01 - 25.1S 12.8 1 8200 2/01 - 25.1S 12.8 1 8200 2/01 - 25.1S 12.8 1 8200 2/01 - 25.1S 13.2 1 8200 2/01 - 25.1S 13.2 1 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 13.2 1 8250		r.	NO 1	0000	2/01	- 1	14.85	8.6	11.4
10290   2/01   -   19.55   9.0   1		г	NO 1	00/0				ı	į
8100  8 9400  9 9400  9 9400  9 9400  9 9200  9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9			ER 1	10920 2	2/01	-	19.08	12.2	10.3
\$ 9400       2/01       -       12.3S       5.2         \$ 9340       -        -       -       -       -       -       -       -       -       -       -       -       -       -       -       -        -       -       -       -       -       -       -       - </td <td></td> <td></td> <td>ER 1</td> <td>6700</td> <td>1/31</td> <td>ю</td> <td>20.0</td> <td>ı</td> <td>13.1</td>			ER 1	6700	1/31	ю	20.0	ı	13.1
9340  9800  2/01  - 12.8S  - 10000  8700  10000  1/30  922  27.8  20.4  11  10600  2/01  - 24.4S  16.9  11  10600  2/01  - 24.4S  16.9  17  10600  2/01  - 24.4S  16.9  17  19  9800  2/01  - 19.5S  12.7  19  9700  970	. 93 . 115		7	8700				,	ı
9800 2/01 - 12.85 7.8				10000				1	ı
9800 2/01 - 12.85 7.8	. 92 . 12		s.	7600				,	1
10000	92			8840				t	ı
8700     1/30     92     27.8     20.4       8750     2/01     -     24.45     16.9       10600     2/01     -     19.58     12.7       8000     1/31     15     4.3     .7       9800     2/01     -     23.6S     15.0       9700     -     23.6S     15.0       9700     -     26.6S     17.3       9800     2/01     -     26.6S     17.3       9580     2/01     -     26.6S     17.3       9580     2/01     -     12.7S     3.9       9100     2/01     -     12.7S     3.9       7500     1/31     92     28.7     21.4       7500     1/31     92     28.7     21.4       7500     1/31     92     28.7     21.4       7500     1/31     92     28.7     21.4       7500     2/01     -     17.5S     8.8       8200     2/01     -     17.5S     8.8       8200     2/01     -     12.2S     7.6       8200     2/01     -     24.7S     13.2       9250     -     -     24.7S     10.8       9250     <	92			8400				ı	ı
8750       2/01       -       24.45       16.9         10600       2/01       -       19.58       12.7         8000       1/31       15       4.3       .7         9800       2/01       -       23.6S       15.0         9700       -       23.6S       15.0         9700       -       26.6S       17.3         1900       2/01       -       26.6S       17.3         10300       2/01       -       12.7S       3.9         10300       2/01       -       12.7S       3.9         10300       2/01       -       17.0S       9.2         10300       2/01       -       13.2S       5.9         10300       2/01       -       17.5S       8.8         10300       2/01       -       17.5S       8.8         10300       2/01       -       12.2S       7.6         10300       2/01       -       12.2S       7.6         10300       2/01       -       24.7S       13.2         10300       2/01       -       24.7S       10.8         10300       2/01       -       12.5S <td>. , t</td> <td></td> <td>GOOSEBERRY R.S. SNOT 7</td> <td>7900 2</td> <td>2/01</td> <td>ı</td> <td>6.08</td> <td>4.3</td> <td>7.2</td>	. , t		GOOSEBERRY R.S. SNOT 7	7900 2	2/01	ı	6.08	4.3	7.2
10600     2/01     -     19.5S     12.7       8000     1/31     15     4.3     .7       9800     2/01     -     23.6S     15.0       9700     -     23.6S     15.0       9900     2/01     -     26.6S     17.3       7900     2/01     -     26.6S     17.3       9580     2/01     -     18.9S     2.7       9100     2/01     -     12.7S     3.9       9100     2/01     -     17.0S     9.2       7500     1/31     92     28.7     21.4       7500     1/31     92     28.7     21.4       7500     2/01     -     17.5S     8.8       8200     2/01     -     17.5S     8.8       8200     2/01     -     17.5S     8.8       8200     2/01     -     12.2S     7.6       8200     2/01     -     24.7S     13.2       9250     -     -     24.7S     10.8       9250     -     -     19.5S     10.8	. 15		HARDSCRABBLE SNOTEL 7.	7250 2	2/01	. 2	23.95	16.8	13.3
8000 1/31 15 4.3 .7 9800 2/01 - 23.6S 15.0 9700 9700 9700 9700 9700 9700 9700 97	15		HARRIS FLAT SNOTEL 7	7700 2	2/01		7.18	1.5	5.2
9800 2/01 - 23.6S 15.0 9700 9700 7950 2/01 - 26.6S 17.3 7900 2/01 - 18.9S 2.7 9580 2/01 - 12.7S 3.9 9100 2/01 - 12.7S 3.9 9100 2/01 - 25.7S 20.5 7500 2/01 - 13.2S 5.9 7500 2/01 - 13.2S 5.9 7500 2/01 - 13.2S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8	ı		HAYDEN FORK SNOTEL 9	9100 2	2/01	-	16.65	16.0	10.2
9700 9000 7950 2/01 - 26.6S 17.3 7900 8600 2/01 - 18.9S 2.7 9580 2/01 - 12.7S 3.9 9100 2/01 - 12.7S 3.9 7500 2/01 - 25.7S 20.5 7500 1/31 92 28.7 21.4 T 9200 2/01 - 13.2S 5.9 7600 2/01 - 17.5S 8.8 8200 8200 2/01 - 17.5S 8.8 8200 8200 2/01 - 17.5S 8.8 8200 8200 2/01 - 17.5S 8.8 8200 8200 2/01 - 17.5S 8.8 8200 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8			HENRY'S FORK 10	10000				1	1
9000 7950 2/01 - 26.6S 17.3 7900 8600 2/01 - 18.9S 2.7 9580 2/01 - 12.7S 3.9 9100 2/01 - 12.7S 3.9 7500 2/01 - 17.0S 9.2 7500 2/01 - 13.2S 5.9 7500 1/31 92 28.7 21.4 T 9200 2/01 - 25.1S 12.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2			HEWINTA SNOTEL 91	9500 2	2/01	-	10.08	10.2	6.2
7950 2/01 - 26.6S 17.3 7900 2/01 - 18.9S 2.7 9580 2/01 - 12.7S 3.9 9100 2/01 - 25.7S 20.5 8200 2/01 - 17.0S 9.2 7500 1/31 92 28.7 21.4 T 9200 2/01 - 13.2S 5.9 7600 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 8200 2/01 - 17.5S 7.6 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8200 2/01 - 17.5S 13.2 8250 2/01 - 19.5S 10.8			HICKERSON PARK SNOTE 97	9100 2	2/01	1	5.28	2.3	3.5
7900       8600     2/01     -     18.95     2.7       9580     2/01     -     12.75     3.9       9100     2/01     -     25.75     20.5       8200     2/01     -     25.75     20.5       7500     1/31     92     28.7     21.4       7500     1/31     92     28.7     21.4       7500     2/01     -     25.1S     12.8       7     8000     2/01     -     17.5S     8.8       8200     2/01     -     12.2S     7.6       8200     2/01     -     24.7S     13.2       9250     -     -     -       8250     2/01     -     24.7S     10.8       9250     2/01     -     19.5S     10.8	1		HIDDEN SPRINGS 5	5500 1	1/31	10	3.0	7.4	6.0
8600     2/01     -     18.95     2.7       9580     2/01     -     12.75     3.9       9100     2/01     -     25.75     20.5       8200     2/01     -     17.05     9.2       7500     1/31     92     28.7     21.4       7500     1/31     92     28.7     21.4       7500     2/01     -     25.18     12.8       7500     2/01     -     25.18     12.8       7500     2/01     -     17.5S     8.8       6030     -     -     -       8200     2/01     -     12.2S     7.6       S     8000     2/01     -     24.7S     13.2       9250     -     -     -     -       7     25.5     10.8     -			HOBBLE CREEK SUMMIT 7.	7420				1	ı
9580 2/01 - 12.75 3.9 9100 2/01 - 25.75 20.5 8200 2/01 - 25.75 20.5 7500	i		HOLE-IN-ROCK SNOTEL 9:	9150 2	2/01		6.08	4.7	3.2
9100 2/01 - 25.7S 20.5 8200 2/01 - 17.0S 9.2 7500 1/31 92 28.7 21.4 T 9200 2/01 - 13.2S 5.9 T 8000 2/01 - 25.1S 12.8 3 6600 - 17.5S 8.8 8200 2/01 - 17.5S 8.8 E 8000 2/01 - 17.5S 7.6 S 8000 2/01 - 12.2S 7.6 S 8000 2/01 - 12.2S 7.6 M 9250	J		HORSE RIDGE SNOTEL 8:	8260 2	2/01		32.55	20.4	15.5
9200 2/01 - 17.0S 9.2 7500 13.2S 5.9 7500 1/31 92 28.7 21.4 T 9200 2/01 - 25.1S 12.8 T 8000 2/01 - 25.1S 12.8 8.8 8.8 6030 - 17.5S 8.8 8.8 8.8 6030 - 17.5S 7.6 5 8000 2/01 - 12.2S 7.6 S 8000 2/01 - 24.7S 13.2 9250	ı			9800				1	1
7500 10300 2/01 - 13.2S 5.9 7500 1/31 92 28.7 21.4 T 9200 2/01 - 25.1S 12.8 T 8000 2/01 - 17.5S 8.8 6030 6030 L 8000 2/01 - 12.2S 7.6 S 8000 2/01 - 24.7S 13.2 9250 M 9250	1		INDIAN CANYON SNOTEL 9:	9100 2	2/01	, <del>``</del>	14.38	5.4	6.1
10300 2/01 - 13.25 5.9 7500 1/31 92 28.7 21.4 T 9200 2/01 - 25.15 12.8 T 8000 2/01 - 17.55 8.8 6030 6030 E 8200 S 8000 2/01 - 12.25 7.6 S 8000 2/01 - 24.75 13.2 M 9250 M 9250 D 700 10.8			JOHNSON VALLEY 81	8850				ı	ı
7500 1/31 92 28.7 21.4  T 9200 2/01 - 25.1S 12.8  3 6600  6030  E 8000 2/01 - 17.5S 8.8	1		KILFOIL CREEK 7:	7300				t	9.1
T 9200 2/01 - 25.1S 12.8 T 8000 2/01 - 17.5S 8.8 6030 8200 E 8000 2/01 - 12.2S 7.6 S 8000 2/01 - 24.7S 13.2 9250 M 9250	92		KILLYON CANYON 6:	6300 1	1/30	. 97	7.6	8.5	12.9
T 8000 2/01 - 17.5\$ 8.8  6030 8200 E 8000 2/01 - 12.2\$ 7.6  9250 M 9250	ì		KIMBERLY MINE SNOTEL 90	9300 2	2/01	. T	12.55	7.0	8.2
3 6600 6030 8200 E 8000 2/01 - 12.2S 7.6 S 8000 2/01 - 24.7S 13.2 9250 M 9250	1		KING'S CABIN SNOTEL 8'	8730 2	2/01	- 1,	14.0S	3.7	7.3
6030  8200  E 8000 2/01 - 12.2S 7.6  S 8000 2/01 - 24.7S 13.2  9250  M 9250			KLONDIKE NARROWS 74	7400				1	1
E 8000 2/01 - 12.25 7.6 S 8000 2/01 - 24.75 13.2 9250 M 9250 - 19.55 10.8			KOLOB SNOTEL 92	9250 2	2/01	ii .	19.58	4 3	11.9
L 8000 2/01 - 12.25 7.6 S 8000 2/01 - 24.75 13.2 9250 M 9250			LAKEFORK #1 SNOTEL 10:	10100 2	2/01	í ·	16.75	9.6	7.2
S 8000 2/01 - 24.75 13.2 9250	ı		LAKEFORK BASIN SNOTE 109	10900 2	2/01	- 2:	22.38	18.6	13.4
9250 - 19.55 10.8	ı		LAKEFORK MOUNTAIN #3 84	8400				ı	1
M 9250 - 19.55 10.8			LAMBS CANYON 74	7400	1/29	63	17.6	14.1	10.9
9250 2/01 - 19.55 10.8			LASAL MOUNTAIN LOWER 88	8800				3.6	1
***	ı		LASAL MOUNTAIN SNOTE 98	9850 2	2/01	- H	11.15	6.4	8.4
- 17.1S 10.2	2/01 - 17.1S	10.2 8.9	LILY LAKE SNOTEL 90	9050 2	1/01	;; -	13.65	12.5	8.1
DONKEY RESERVOIR SNO 9800 2/01 - 8.75 3.3 5.0	ı		LITTLE BEAR LOWER 60	0009				ı	,

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SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-97				DEPTH	CONTENT	YEAR	1961-97
LITTLE BEAR SNOTEL	6550	2/01	ı	20.48	7.4	10.1	THISTLE FLAT	8500				ı	1
LITTLE GRASSY SNOTEL	0019	2/01	1	3.68	0.1	2.3	TIMBERLINE	9100				1	1
LONG FLAT SNOTEL	8000	2/01	1	4.78	2.1	5.6	TIMPANOGOS DIVIDE SN	8140	2/01	ı	33.28	12.2	15.1
LONG VALLEY JCT. SNT	7500	2/01	1	6.58	1.1	3.2	TONY GROVE LK SNOTEL	8400	2/01	1	48.58	31.6	22.0
LOOKOUT PEAK SNOTEL	8200	2/01	ı	29.08	22.2	19.5	TONY GROVE R.S.	6250				1	
LOST CREEK RESERVOIR	6130				,		TRIAL LAKE	0966				1	15.4
MAMMOTH-COTTONWD SNT	8800	2/01	1	25.48	13.5	11.8	TRIAL LAKE SNOTEL	0966	2/01	1	30.78	20.5	15.8
MERCHANT VALLEY SNOT	8750	2/01	1	16.75	7.2	7.0	TROUT CREEK SNOTEL	9400	2/01		8.68	2.8	6.0
MIDDLE CANYON	7000				ı	•	UPPER JOES VALLEY	8900				•	1
MIDWAY VALLEY SNOTEL	9800	2/01	1	19.68	4.9	13.9	VERNON CREEK SNOTEL	7500	2/01	,	14.68	3.7	6.8
MILL CREEK	6950	1/29	67	19.3	13.5	13.4	VIPONT	7670				1	1
MILL-D NORTH SNOTEL	0968	2/01	1	28.55	19.2	14.8	WEBSTER FLAT SNOTEL	9200	2/01	1	10.58	4.3	10.1
MILL-D SOUTH FORK	7400	1/30	89	20.3	16.6	12.7	WHITE RIVER #1 SNOTE	8550	2/01	1	19.08	10.0	9.8
MINING FORK SNOTEL	8000	2/01	ı	21.98	13.1	10.2	WHITE RIVER #3	7400				•	1
MONTE CRISTO SNOTEL	8960	2/01	1	33.98	24.9	17.3	WIDTSOE #3 SNOTEL	9500	2/01	,	12.2S	1.8	9.9
MOSBY MIN. SNOTEL	9500	2/01	t	16.08	3.0	5.9	WRIGLEY CREEK	0006				1	1
MT.BALDY R.S.	9500				ı	,	YANKEE RESERVOIR	8700				1	1
MUD CREEK #2	8600				1	1	NOTE:						
OAK CREEK	7760	2/01	ı	13.4e	,	7.9	The S flag following Water Content for SNOTEL	Water C	ontent fc	r SNOTEI		icates	sites indicates telemetered
PANQUITCH LAKE	8200				1	•	data. The Depth reading preceeding S flagged	ing pre	ceeding S	flagged	data was	measure	data was measured around the
PARLEY'S CANYON SNOT	7500	2/01	1	15.58	13.3	12.1	snow pillows at the time of the ground survey	ime of	the groun	d survey	and may not be the	ot be t	he same date as
PARLEY'S CANYON SUM.	7500	1/29	99	18.4	16.3	12.0	the telemetered value.						
PAYSON R.S. SNOTEL	8050	2/01	1	13.88	9.3	11.3							
PICKLE KEG SNOTEL	0096	2/01	1	13.58	10.9	10.0							
PINE CREEK SNOTEL	8800	2/01	ı	18.88	10.5	10.4							
RED PINE RIDGE SNOTE	9200	2/01	t	16.08	12.3	10.9							
REDDEN MINE LOWER	8500				1	11.5							
REES'S FLAT	7300				1	8.8							
ROCK CREEK SNOTEL	7900	2/01	ı	14,38	6.7	5.3							
ROCKY BN-SETTLEMT SN	8900	2/01	ı	24.18	11.0	15.1							
SEELEY CREEK SNOTEL 1	10000	2/01		15.18	8.8	8.7							
SILVER LAKE (BRIGHT.)	8730	1/30	86	32.8	19.0	15.6							
SMITH MOREHOUSE SNTL	7600	2/01		15.13	12.0	8.7							
SNOWBIRD SNOTEL	9700	2/01	1	38.05	26.4	22.0							
SPIRIT LAKE	10300				ı								
SQUAW SPRINGS	9300				ı								
STEEL CREEK PARK SNO 10100	10100	2/01	1	12.38	13.1	8.6							
STILLWATER CAMP	8550				1	,							
STRAWBERRY DIVIDE SN	8400	2/01	ı	26.05	14.7	11.8							
STUART R.S.	7950				1	ı							
SUSC RANCH	8200				1	1							
TALL POLES	8800				•	ı							
THAYNES CANYON SNOTE	9200	2/01	1	24.78	18.0	12.2							

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### UTAH SURFACE WATER SUPPLY INDEX

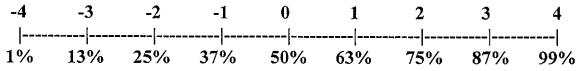
NRCS SNOW SURVEYS - As of Feb 1, 1997

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero indicating a median water supply as compared to historical analysis.

SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage alone. The SWSI index allows comparison of water availability between basins/regions for drought or flood severity analysis.

Basin or Region	SWSI/% Value	Most Recent Year With Similar SWSI Value	Agricultural Water Shortage May Occur if SWSI less than
Bear River	2.2 / 76%	75,67,74,80	-3.8
Ogden River	2.9 / 85%	82,69,80,83	
Weber River	2.5 / 80%	74,80,85,75	
Tooele Valley	NA		
Provo	NA		
North Slope	NA		
West Uintah Basin	3.6 / 93%	86,87,95	
East Uintah Basin	2.4 / 79%	84,87,86,95	
Price River	2.7 / 83%	68,75,69,80	
San Rafael	3.8 / 96%	80,86,84,83	
Moab	2.1 / 75%	88,87,93,84	
Upper Sevier River	1.5 / 68%	68,82,86,88	
Lower Sevier River	NA		
Beaver River	2.3 / 78%	82,84,73,86	
Virgin River	2.4 / 79%	88,92,95,93	

## SWSI SCALE AND PERCENT CHANCE OF NON-EXCEEDANCE



Much Below Below Normal Near Normal Water Supply Conditions Above Normal Much Above

The percent chance of non-exceedance is a probability that can be best thought of as a simple scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and 50 representing average conditions. Each SWSI unit represents about 12% of historical occurences scaled between -4 and + 4, comparable to the Palmer Drought Index. Normal water supply conditions comprise the middle third (33%) of the scale with dry and wet categories occupying a third (33%) at each end of the spectrum.

Many agencies contribute data to calculate SWSI values: National Weather Service, Bureau of Reclamation, Utah State Water Resources and many private Corporations and Individuals.

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Natural Resources Conservation Service

# Utah Basin Outlook Report March 1, 1997



# **Basin Outlook Reports**

## and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C., 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

# STATE OF UTAH GENERAL OUTLOOK Mar 1, 1997

#### **SUMMARY**

February was a very welcome respite from the blistering snowpack accumulation pace set throughout the early season months. While snowpacks increased, they did so at a much slower rate. Even with this moderated pace, snowpacks across the state are above to much above average and in some cases, such as the Weber Basin, are within one storm of the maximum snowpack of record with at least one more accumulation month and possibly two months yet remaining in the season. Given average snowpack accumulation during March, the Bear, Weber, Provo, Uintahs and Southeast Utah could all exceed or come very close to exceeding their record maximum snowpacks. February's snowpack increase was 50 to 90% of average except on the Sevier and Southeast Utah which were slightly above normal. All snowpacks across the state are above to much above their normal April 1 peak values. Precipitation across Utah's mountains ranged from 50% to 123% of average. Most areas were below normal. Water supply conditions are excellent across the entire state. Streams should have high flows that last well into the summer months. Reservoirs should easily fill, even Bear Lake and Strawberry should see much higher levels than those of the past ten years. Given the extraordinary snowpacks on the Bear, Weber, Utah Lake, Uintah Basin, Price, and Southeast Utah there continues to be an increasing potential for agricultural inundation this spring. Those areas prone to agricultural flooding are likely to experience it again this season. Future climatic conditions will determine the potential and extent of any inundation.

#### **SNOWPACK**

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 160% of normal, about 1.5 times those of last year. Snowpacks in the north are much above average ranging from 155% to 175% of normal. In the south, snowpacks range from 130% to 150% of average. In southeastern Utah, an area hard hit by drought last year, snowpacks range from 120% to 220 % of average, 2 to 7 times as much as last year. These are the highest March 1 snowpacks ever for the Weber, Provo, and Uintahs and very close to a new record on the Bear and southeast Utah. All areas have exceeded their average April 1 peak, some by as much as 40%, with 20% of the accumulation season remaining.

#### **PRECIPITATION**

Mountain precipitation in February, as measured by the NRCS SNOTEL system was below normal at 73% of average statewide. This brings the seasonal accumulation (Oct-Feb) to 149% of average. Precipitation was highest on the North Slope (123%) and over the Tooele area at 106% of normal.

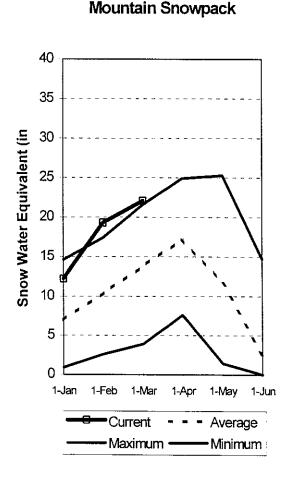
National Weather Service precipitation figures range from 16% to 250% of average, indicating a real mixed bag across the state. Desert sites such as Callao (248%), Dugway (249%) and Green River (253%) had the highest percentages. Many of the valley locations of northern, central and southern Utah were below average such as: Ferron - 29%, Panguitch - 16% and New Harmony - 25%.

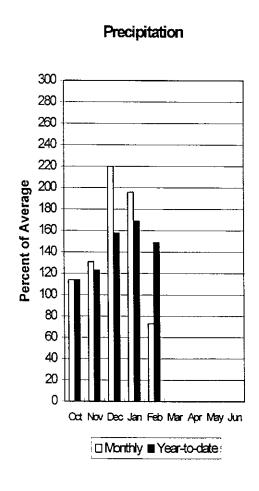
#### **RESERVOIRS**

Storage in 41 of Utah's key irrigation reservoirs is at 75% of capacity. Many reservoirs are releasing water in expectation of high flows.

#### **STREAMFLOW**

Streamflow forecasts for snowmelt runoff range from above average to near record levels throughout Utah. In the north, much above average to near record conditions prevail whereas in the south, above normal streamflow is expected. Streamflows across the state could have much higher peak flows and longer duration than normal. There is a significant potential, given even average conditions the remainder of the snowpack accumulation season, for some agricultural inundation in almost all areas of the state.





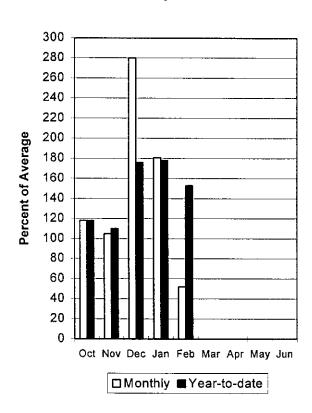
## Bear River Basin Mar 1, 1997

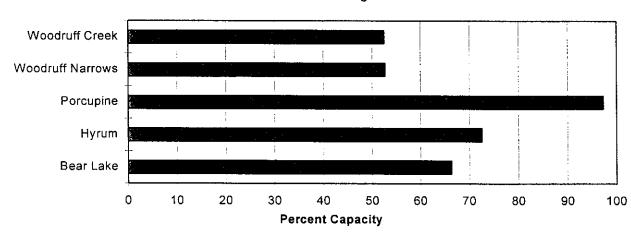
Snowpack on the Bear River Basin is much above average at 163% of normal, ranging from 128% to 221% at specific sites. This is the second highest March 1 snowpack on the Bear ever. The Bear is at 141% of its average April 1 snowpack with the record maximum being 152% of normal. February precipitation was below normal at 52%, which brings the seasonal accumulation (Oct-Feb) to 153% of average. Water supply conditions are excellent and much above average runoff is expected with a high potential for agricultural inundation. Reservoir storage is at 66% capacity.

#### Mountain Snowpack

## 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Mar 1-May Current Average Maximum Minimum

## Precipitation





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# BEAR RIVER BASIN Streamflow Forecasts - March 1, 1997

ecast	į	Drier ====	== Future C	onditions ==:	==== Wetter	====>>	
	<u> </u>					l.	
	=======		= Chance Of I	Exceeding * ==	-=========	======	
riod	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
======		<b>######</b>	========		=========	<b>===</b> =====	=========
:-JUL	125	150	170	148	192	231	115
- JUL	123	184	225	151	266	327	149
-JUL	2.88	5.04	6.50	171	7.96	10.12	3.80
-JUL	116	157	l ] 185	157	213	254	118
-JUL	144	159	170	167	181	196	102
-JUL	37	50	62	188	77	105	33
-JUL	356	418	   460	160	502	564	288
-JUL	13.5	17.0	! 20	164	24	30	12.2
-JUL	58	65	69	147	74	80	47
- JUL	159	190	[   215	201	243	291	107
-JUL	73	91	105	194	121	150	54
	- 10r - 10r - 10r - 10r - 10r - 10r - 10r - 10r - 10r	R-JUL 125 R-JUL 123 R-JUL 2.88 R-JUL 116 R-JUL 144 R-JUL 37 R-JUL 356 R-JUL 13.5 R-JUL 58 R-JUL 58	R-JUL 125 150 R-JUL 123 184 R-JUL 2.88 5.04 R-JUL 116 157 R-JUL 144 159 R-JUL 37 50 R-JUL 356 418 R-JUL 13.5 17.0 R-JUL 158 65 R-JUL 159 190	R-JUL 125 150 170 R-JUL 123 184 225 R-JUL 2.88 5.04 6.50 R-JUL 116 157 185 R-JUL 144 159 170 R-JUL 37 50 62 R-JUL 356 418 460 R-JUL 356 418 460 R-JUL 13.5 17.0 20 R-JUL 58 65 69 R-JUL 159 190 215	R-JUL 125 150 170 148 R-JUL 123 184 225 151 R-JUL 2.88 5.04 6.50 171 R-JUL 116 157 185 157 R-JUL 144 159 170 167 R-JUL 37 50 62 188 R-JUL 356 418 460 160 R-JUL 13.5 17.0 20 164 R-JUL 158 65 69 147 R-JUL 159 190 215 201	R-JUL 125 150 170 148 192 R-JUL 123 184 225 151 266 R-JUL 2.88 5.04 6.50 171 7.96 R-JUL 116 157 185 157 213 R-JUL 144 159 170 167 181 R-JUL 37 50 62 188 77 R-JUL 356 418 460 160 502 R-JUL 13.5 17.0 20 164 24 R-JUL 58 65 69 147 74	R-JUL 125 150 170 148 192 231 R-JUL 123 184 225 151 266 327 R-JUL 2.88 5.04 6.50 171 7.96 10.12 R-JUL 116 157 185 157 213 254 R-JUL 144 159 170 167 181 196 R-JUL 37 50 62 188 77 105 R-JUL 356 418 460 160 502 564 R-JUL 13.5 17.0 20 164 24 30 R-JUL 158 65 69 147 74 80

BEAR RIVER BASIN   Reservoir Storage (1000 AF) - End of February					BEAR RIVER BASIN   Watershed Snowpack Analysis - March 1, 1997			
Reservoir	Usable   Capacity		ble Stora Last Year		Numb Watershed of Data S	er Th	is Year as % of	=
	=======================================	=======	=======	======	<b></b>			==
BEAR LAKE	1421.0	943.2	616.6	992.5	BEAR RIVER, UPPER (abv Ha 6	120	0 156	
HYRUM	15.3	11.1	7.0	10.8	BEAR RIVER, LOWER (blw Ha 7	148	B 172	
PORCUPINE	11.3	11.0	11.8	3.7	LOGAN RIVER 4	152	2 188	
WOODRUFF NARROWS	57.3	30.2	45.0		RAFT RIVER 2	157	2 162	
WOODRUFF CREEK	4.0	2.1	4.0	j	BEAR RIVER BASIN 13	13:	5 165	
	::::::::::::::::::::::::::::::::::::::	=======		.=======		=======		==

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

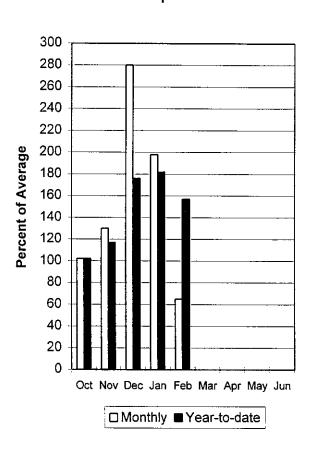
# Weber and Ogden River Basins Mar 1, 1997

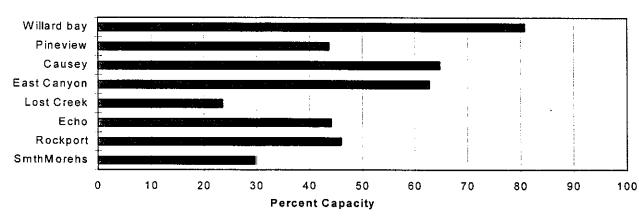
Snowpack on the Weber and Ogden Watersheds is at 169% of average. Individual sites range from 132% to 207 % of average. This is the highest March 1 snowpack on the Weber ever. Precipitation during February was below normal at 65% of average, bringing the seasonal accumulation (Oct-Feb) to 157% of normal. Reservoir storage on the Weber system is at 60% of capacity. General water supply conditions are excellent with the prospect of having much above average runoff this spring. Streamflows could have much higher peaks and longer duration than normal, with a high potential for agricultural inundation.

## **Mountain Snowpack**

# 40 35 30 Snow Water Equivalent (in) 25 20 15 10 5 0 1-Feb 1-May Current Average Maximum Minimum :

#### Precipitation





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#### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - March 1, 1997

***************************************											
		<<=====	: Drier ====	== future Co	onditions ==	===== Wetter	. ====>> [				
Forecast Point	Forecast	========		≃ Chance Of £	Exceeding * =	===========	  -======				
	Period	90% (1000AF)	70% (1000AF)	(1000AF)	Probable)   (% AVG.)	30% (1000AF)	10%   (1000AF)	30-Yr Avg. (1000AF)			
SMITH AND MOREHOUSE CK or Oakley	APR-JUN		46	=========   50	:  ========:   167	54	======================================	30			
WEBER R nr Oakley	APR-JUL	149	168	180	148	192	211	122			
ROCKPORT RESERVIR inflow	APR-JUL	163	188	205	153	222	247	134			
CHALK CK at Coalville, Ut	APR-JUL	53	66	   75	 171	84	97	44			
WEBER R nr Coalville, Ut	APR-JUL	165	192	210	154	2 <b>28</b>	255	136			
ECHO RESEROIR Inflow	APR-JUL	209	251	280	159	309	351	176			
LOST CK Res Inflow	APR-JUL	18.7	25	l   29	169	33	39	17.2			
E CANYON CK nr Morgan	APR-JUL	32	41	46	153	52	60	30			
WEBER R at Gateway	APR-JUL	451	492	520	150	548	589	347			
S FORK OGDEN R nr Huntsville	APR-JUL	86	97	   105	167	113	124	63			
PINEVIEW RESEROIR Inflow	APR-JUL	160	190	210	169	230	260	124			
WHEELER CK nr Huntsville	APR-JUL	10.13	11.24	12.00	194	12.76	13.87	6.20			

WEBER & OGDEN WATERSHEDS in Utah Reservoir Storage (1000 AF) - End of February WEBER & OGDEN WATERSHEDS in Utah Watershed Snowpack Analysis - March 1, 1997

======================================	==========			=======				
	Usable	*** Usa	ble Stora	ge ***		Number	This Year	r as % of
Reservoir	Capacity	This	Last		Watershed	of	=======	=======
		Year	Year	Avg	:	Data Sites	Last Yr	Average
	<b>==========</b> :		=======	======= :		========		=======
CAUSEY	7.1	4.6	3.7	2.3	OGDEN RIVER	4	168	183
EAST CANYON	49.5	31.1	35.6	27.7	WEBER RIVER	8	134	163
ECHO	73.9	32.6	42.1	49.5	WEBER & OGDEN WATERSHED	s 12	146	171
LOST CREEK	22.5	5.3	15.3	13.4				
PINEVIEW	110.1	48.1	57.9	48.7				
ROCKPORT	60.9	28.0	39.0	30.2				
WILLARD BAY	215.0	173.7	180.1	116.4				

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

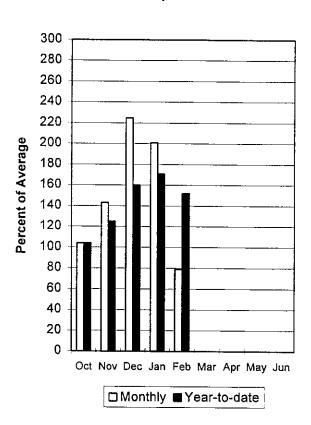
# Utah Lake, Jordan River & Tooele Valley Basins Mar 1, 1997

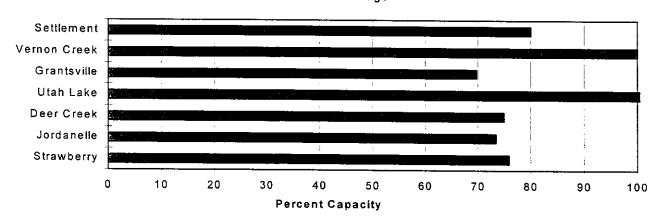
Snowpacks over these watersheds are much above average at 157% of normal, the highest March 1 snowpack ever. Individual sites range from 102% to 210% of average. Precipitation during February was below normal at 79% of normal, bringing the seasonal accumulation (Oct-Feb) to 152% of average. Reservoir storage is at 87% of capacity. Water supply conditions are much above average and much above average peak flows, with longer flow durations, can be expected. There is a potential for agricultural inundation.

## Mountain Snowpack

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Mar 1-Apr 1-May 1-Jun 'Current Average Maximum Minimum

## Precipitation





# UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - March 1, 1997

		<<======	Drier ====	== Future Co	onditions ==	===== Wetter	=====>>	
Forecast Point	Forecast	=======	=======	= Chance Of E	xceeding * =:	==========	=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
=======================================		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
PAYSON CK nr Payson	APR-JUL	1.76	3.89	=====================================	: =======:   114		8.49	4.40
SPANISH FORK nr Castilla	APR-JUL	49	89	112	151	136	175	74
HOBBLE CK nr Springville	APR-JUL	21	27	29	154	32	37	18.8
PROVO R nr Hailstone	APR-JUL	119		   157	144		195	109
PROVO R below Deer Creek Dam	APR-JUL	131		188	147		246	128
AMERICAN FORK or American Fk.	APR-JUL	45	50	53	166	56	61	32
UTAH LAKE inflow	APR-JUL	305		   490	151		674	324
L COTTONWOOD CRK nr SLC	APR-JUL	45	52	56	144	60	67	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	46	53	57	150	61	68	38
PARLEY'S CK nr SLC	APR-JUL	9.2	15.3	!   19.0	120	23	29	15.9
MILL CK nr SLC	APR-JUL	5.07	6.92	8.10	125	9.28	11.38	6.50
DELL FK nr SLC	APR-JUL	5.04	7.56	9.00	127	10.44	13.21	7.10
MIGRATION CK nr SLC	APR-JUL	0.88	3.12	   4.50	107 i	5.88	8.11	4.20
CITY CK nr SLC	APR-JUL	5.56	8.25	9.90	119	11.55	14.19	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	1262	1804	2300	172	2933	4191	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	1191	2263	3500	152	5413	10286	2300
S WILLOW CK nr Grantsville	APR-JUL	2.26	3.59	4.50	145 I	5.41	6.74	3.10

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of February

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Watershed Snowpack Analysis - March 1, 1997

	Usable	*** Usa	ble Stora	ge ***		Number	This Yea	ras % of
Reservoir	Capacity	This	Last	1	Watershed	of	=======	=======
		Year	Year	Avg	D	ata Sites	Last Yr	Average
	======================================	=======	=======	====== =		=======		========
DEER CREEK	149.7	112.2	117.4	95.5	PROVO RIVER & UTAH LAKE	7	144	165
GRANTSVILLE	3.3	2.3	3.2	j	PROVO RIVER	4	144	171
SETTLEMENT CREEK	1.0	0.8	0.5	0.7	JORDAN RIVER & GREAT SAL	r 5	123	146
STRAWBERRY-ENLARGED	1105.9	839.6	693.2	j	TOOELE VALLEY WATERSHEDS	4	179	162
UTAH LAKE	870.9	931.5	902.8	689.4	UTAH LAKE, JORDAN RIVER	§ 16	141	157
VERNON CREEK	0.6	0.6	0.6	0.5	•		*	. = .

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

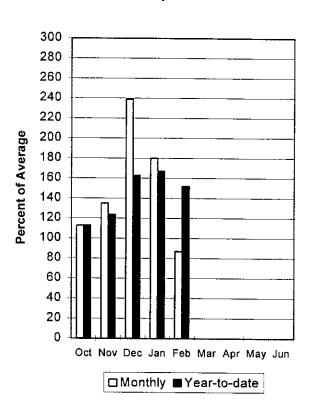
# Uintah Basin and Dagget SCD's Mar 1, 1997

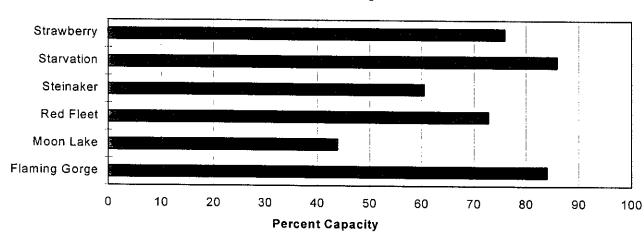
Snowpacks across the Uintah Basin and North Slope areas are divided with a north to south split. The north is above to much above average at 142% and the southern area is higher yet, near 167% of average. This is the highest March 1 snowpack ever. Precipitation during February was above average on the North Slope (123%) and below normal on the South Slope, (75%), bringing the seasonal accumulation (Oct-Feb) to 152% of average. Reservoir storage is at 75% of capacity. Water supply conditions are excellent with much above average streamflow expected, high peak flows and a high potential for agricultural inundation.

#### Mountain Snowpack

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 1-Feb 1-Apr 1-May Current Average Maximum Minimum

#### Precipitation





# UINTAH BASIN & DAGGET SCD'S

Streamflow Forecasts - March 1, 1997

				== Future Co						
Forecast Point	Forecast	   =======	=======================================	= Chance Of E	xceedina * =	===========	======			
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg.		
======================================		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)		
MEEKS CABIN RESERVOIR Inflow	APR - JUL	107	118	125	=====================================	======================================	143	======================================		
STATE LINE RESERVOIR INFLOW	APR-JUL	33	38	42	140	46	52	30		
HENRYS FORK or Manila	APR-JUL	36	50	60	143	70	84	42		
FLAMING GORGE RES INFLOW	APR-JUL	1399	1675	   1800	151	1925	2201	1196		
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	19.8	24	27	136	30	34	19.8		
ASHLEY CK nr Vernat	APR-JUL	57	68	75	147	82	93	51		
WF DUCHESNE RIVER or Hanna	APR-JUL	30	34	   40	154	46	50	26		
DUCHESNE R nr Tabiona	APR-JUL	129	144	155	148	166	181	105		
ROCK CK nr Mountain Home	APR-JUL	114	126	135	144	144	156	94		
UPPER STILLWATER RESV inflow	APR-JUL	101	112	   120	148 I	128	139	81		
DUCHESNE R abv Knight Diversion	APR-JUL	226	261	285	151	309	344	189		
STRAWBERRY RES nr Soldier Springs	APR-JUL	67	86	100	170	115	139	59		
CURRANT CREEK RESV Inflow	APR-JUL	33	37	   40	191 I	43	47	21		
STARVATION RESERVOIR inflow	APR-JUL	186	209	225	192	241	264	117		
MOON LAKE Inflow	APR-JUL	82	93	100	145	107	118	69		
YELLOWSTONE R nr Altonah	APR-JUL	74	86	   95	146	104	116	65		
DUCHESNE R at Myton	APR-JUL	390	456	500	190	544	610	263		
WHITEROCKS R nr Whiterocks	APR-JUL	60	75	85	147	95	110	58		
UINTA R nr Neola	APR-JUL	83	105	[   120	141	135	157	85		
DUCHESNE R nr Randlett	APR-JUL	417	533	630	192	727	846	328		

	UINTAH BASIN & DAGGET S	CD'S		UINTAH BASIN	& DAGGET S	SCD'S
Re	servoir Storage (1000 AF) - End	of February		Watershed Snowpack A	nalysis -	March 1, 1997
***===========	=======================================		=======	=======================================	=======	
	Usable	*** Usable Storage *	**		Number	This Year as % of
Reservoir	Capacity	This Last	l w	atershed	of	

	Usable	*** Us	able Stora	ge ***		Number	This Yea	ras % of
Reservoir	Capacity	This	Last		Watershed	of	======	=======
	l	Year	Year	Avg	D	ata Sites	Last Yr	Average
		======	========	======	=======================================	========	=======	========
FLAMING GORGE	3749.0	3150.6	3194.4		UPPER GREEN RIVER in UTA	н 6	132	142
MOON LAKE	49.5	21.7	28.0	30.5	ASHLEY CREEK	2	236	154
RED FLEET	25.7	18.7	21.0	j	BLACK'S FORK RIVER	2	88	127
STEINAKER	33.4	25.2	31.0	21.1	SHEEP CREEK	1	189	140
STARVATION	165.3	142.0	147.9	112.1	DUCHESNE RIVER	11	146	167
STRAWBERRY-ENLARGED	1105.9	839.6	693.2		LAKE FORK-YELLOWSTONE CR	E 4	128	156
				į	STRAWBERRY RIVER	4	147	173
				ĺ	UINTAH-WHITEROCKS RIVERS	2	208	171
				ĺ	UINTAH BASIN & DAGGET SC	D 17	143	161
	==========	: <b>====</b> ===	=======	=======	=======================================	========	========	========

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

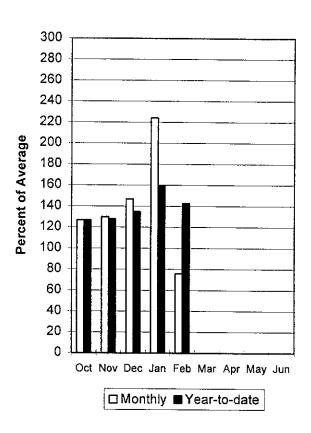
# Carbon, Emery, Wayne, Grand and San Juan Co. Mar 1, 1997

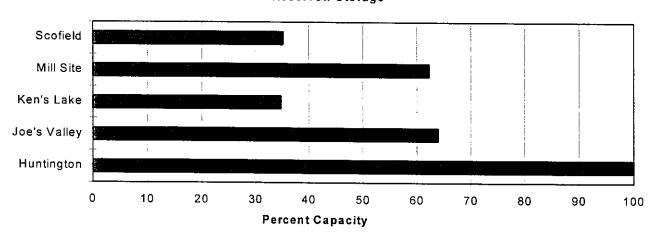
Snowpacks in this region are at 173% of average. The Blue Mountains, have almost 7 times more snow than last year. Individual sites range from 114% to 222% of normal. This is the second highest March 1 snowpack ever. Precipitation during February was below average at 76%, bringing the seasonal accumulation (Oct-Feb) to 143% of normal. Reservoir storage is at 52% of capacity. General water supply conditions are much above average throughout the region and above average flows are expected. Agricultural inundation is likely.

## **Mountain Snowpack**

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-May \*Current Average Maximum Minimum

# Precipitation





# CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.

Streamflow Forecasts - March 1, 1997

		<<======	Drier ====	== Future Co	onditions ==	===== Wette	======>>	<b>#\$</b> ##########
Forecast Point	Forecast	=======	========	= Chance Of E	exceeding * =	:=========	========	
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	= <b>====</b> ===============================	18.4	=====================================	474	=======================================	:== <b>==</b> ======	
SCOFIELD RESV Inflow	APR-JUL		10.4	20	171	22	25	11.7
		40		75	171		110	44
WHITE R blw Tabbyune Ck	APR-JUL	23	28	32	171	36	41	18.7
GREEN R at Green River, UT	APR-JUL	4147	4655	i Í 5000	159	5345	5853	3151
ELECTRIC LAKE inflow	APR-JUL	26	29	30	199	32	34	15.1
HUNTINGTON CK nr Huntington	APR-JUL	48		70	171	32	92	41
JOE'S VALLEY RESV Inflow	APR-JUL	55	70	   80	151 I	90	105	53
FERRON CK nr Ferron	APR-JUL	45	54	60	154	66	75	
COLORADO R nr Cisco	APR-JUL	4710	5909	6400	155	6891	8099	39 4132
					j			-
MILL CK at Sheley Tunnel	APR-JUL	4.46	6.03	7.40	123	9.08	12.29	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	3.42	6.44	8.50	131	10.56	13.58	6,50
MUDDY CK nr Emery	APR-JUL	26	30	35	179	41	44	19.6
LLOYD'S RESERVOIR inflow	MAR-JUL	2.49	4.31	   6.40	221	8.49	11.57	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	6.21	9.16	11.50	288	14.10	18.41	4.00
SAN JUAN R nr Bluff	APR-JUL	1394	1742	1930	168	2118	2465	1152
	=======================================	========	========		========	========	========	

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN CO. Reservoir Storage (1000 AF) - End of February

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - March 1, 1997

Danamusin	Usable	*** Usable Storage ***		======== Number	This Yea	======= r as % of		
Reservoir	Capacity	This	Last	į	Watershed	of	=======	=======
	1	Year	Year	Avg		Data Sites	Last Yr	Average
		========	:=======	======	=======================================	=======================================		========
HUNTINGTON NORTH	4.2	4.2	4.2	3.0	PRICE RIVER	3	160	190
JOE'S VALLEY	61.6	39.4	44.4	44.6	SAN RAFAEL RIVER	3	134	159
KEN'S LAKE	2.3	0.8	1.9	Ì	MUDDY CREEK	1	149	167
MILL SITE	16.7	10.4	12.9	4.0	FREMONT RIVER	3	222	168
SCOFIELD	65.8	23.2	31.6	32.2 j	LASAL MOUNTAINS	1	132	121
				Ì	BLUE MOUNTAINS	1	679	222
				I	WILLOW CREEK	1	220	168
				1	CARBON, EMERY, WAYNE,	GRA 13	170	173
	=======================================	========	=======		=======================================	=========	========	========

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<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

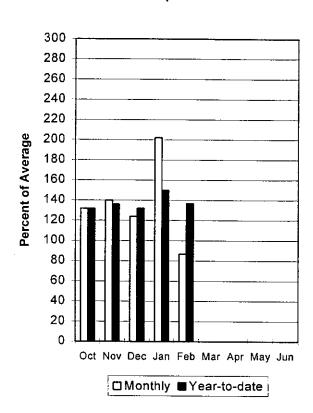
# Sevier and Beaver River Basins Mar 1, 1997

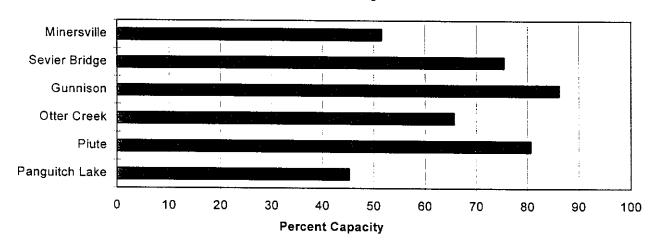
Snowpacks on the Sevier River Basin are at 149% of average. The Beaver River Basin is higher at 176% of normal. Individual sites range from 95% to 202% of average. Given maximum March snowfall, the Sevier Basin would be close to a record snowpack on April 1. Precipitation during February was 87% of normal, bringing the seasonal accumulation (Oct-Feb) to 137% of average. Reservoir storage is at 74% of capacity. General water supply conditions are above to much above average and streamflows should be much higher and of longer duration than last year. There is some potential for agricultural inundation.

#### **Mountain Snowpack**

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Mar 1-May Current Average Maximum Minimum :

#### Precipitation





# SEVIER & BEAVER RIVER BASINS

Streamflow Forecasts - March 1, 1997

=======================================											
		<<======	:Drier ====	== Future Ca	onditions ==:	===== Wetter	. =====>>				
Forecast Point	Forecast	=======	=======================================	= Chance Of (	Exceeding * ==	=======================================	======	, I			
	Period	90%	70%		Probable)	30%	10%	30-Yr Avg.			
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)			
=======================================	==========	========	=========		=======================================		========	:=========			
SEVIER R at Hatch	APR-JUL	42	58	67	124	77	92	54			
SEVIER R nr Circleville	APR-JUL	55	76	89	119	103	123	75			
SEVIER R nr Kingston	APR-JUL	59	83	97	117	111	135	83			
AUT MARINE DE											
ANTIMONY CK or Antimony	APR-JUL	6.07	7.98	9.00	123	10.02	12.14	7.30			
E F SEVIER R nr Kingston	APR-JUL	15.9	31	40	133	49	64	30			
SEVIER R blw Piute Dam	APR-JUL	58		127	110		196	115			
CLEAR CK nr Sevier	APR-JUL	16.0	23	   27	129	31	38	21			
SALINA CK at Salina	APR-JUL	0.5		18.5	105	3.	43	17.6			
PLEASANT CK nr Pleasant	APR-JUL	8.16	9.82	10.70	126	11.58	13.43	8.50			
EPHRAIM CK nr Ephraim	APR-JUL	0.7	17.0		122	47.0					
SEVIER R nr Gunnison	_	9.3	13.0	15.1	120	17.2	21	12.6			
CHICKEN CK nr Levan	APR-JUL	55	191	275	115	359	495	239			
CHICKEN CK III LEVAN	APR-JUL	4.39	5.35	6.00	128	6.65	7.61	4.70			
OAK CK nr Oak City	APR-JUL	0.55	1.53	2.20	129	2.87	3.85	1.70			
BEAVER R or Beaver	APR-JUL	24	34	41	158	48	58	26			
MINERSVILLE RESEROIR inflow	APR-JUL	17.3	24	28	168	32	39	16.7			
=======================================		========		<b>======</b> ==============================			========	<b>=======</b> =============================			

SEVIER &	BEAVER RIVER BA	SINS		- 1	SEVIER & BEAVER RIVER BASINS					
Reservoir Storage	(1000 AF) - End	of Febru	ary	1	Watershed Snowpack Analysis - March 1, 1997					
Reservoir	Usable     Capacity	*** Usa This	ble Stora	====== ge ***   		umber of	This Year as % of			
=======================================		Year	Year	Avg		ta Sites	Last Yr	Average		
GUNNISON	20.3	17.5	20.3	14.0	UPPER SEVIER RIVER (south	7	 178	144		
MINERSVILLE (RkyFd)	23.3	12.0	22.8	12.9	EAST FORK SEVIER RIVER	2	176	155		
OTTER CREEK	52.5	34.5	52.5	31.2	SOUTH FORK SEVIER RIVER	5	178	141		
PIUTE	71.8	57.9	68.1	41.5	LOWER SEVIER RIVER (inclu	6	151	145		
SEVIER BRIDGE	236.0	178.0	234.0	119.6	BEAVER RIVER	2	163	176		
PANGUITCH LAKE	22.3	10.1	18.1	j	SEVIER & BEAVER RIVER BAS	15	162	149		
<b></b>	=======================================		=======	=======	=======================================					

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

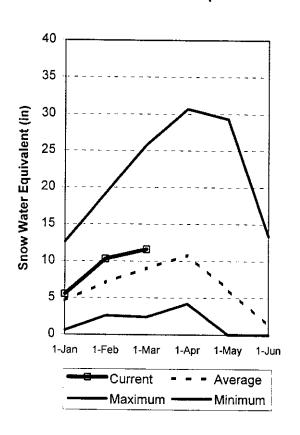
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

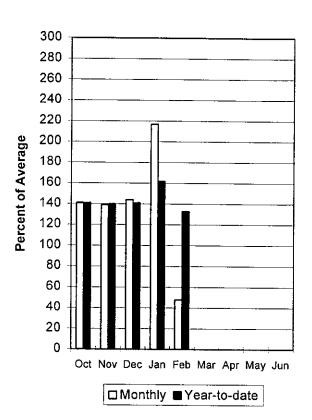
# E. Garfield, Kane, Washington, & Iron co. Mar 1, 1997

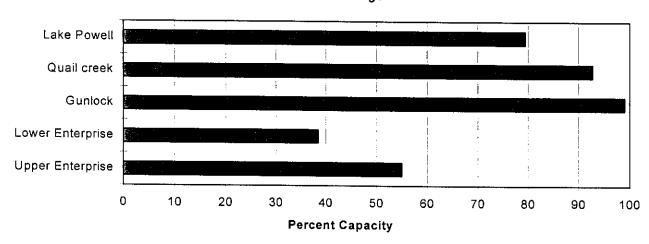
Snowpacks in this region are much above normal at 128% of average, about 2 times that of last year. This is the lowest snowpack in the state, and in any other year would be considered outstanding. This snowpack should produce excellent water supply this spring. Precipitation during February was much below normal at 48%, bringing the seasonal accumulation (Oct-Feb) to 133% of normal. General water supply conditions are much above average. Reservoir storage is at 86% of capacity. This area has some potential for agricultural inundation.

#### **Mountain Snowpack**



# Precipitation





E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - March 1, 1997

		<<====== 	Drier ====	== Future Co	onditions :	====== Wetter	=====>>			
Forecast Point	Forecast	-=====	========	= Chance Of I	Exceeding *	=======================================	=======			
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)		
	=======================================	=========	=========	========	=========	=   =========	========	========		
COAL CK nr Cedar City	APR-JUL	8.5	15.4	19.5	104	24	31	18.8		
LAKE POWELL INFLOW	APR-JUL	9514		12500	162	j	15470	7735		
VIRGIN R nr Hurricane	APR-JUL	19.8		105	133		175	79		
				]		1				
SANTA CLARA R nr Pine Valley	APR-JUL	1.01		7.00	132	İ	15.00	5.30		
	=======================================		=======================================		========		========			

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E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of February

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Watershed Snowpack Analysis - March 1, 1997

************	===========		-=======				=========	
	Usable	*** Us	able Storag	e ***		Number	This Year	ras % of
Reservoir	Capacity	This	Last	į	Watershed	of		
	ļ	Year	Year	Avg	Dat	ta Sites	Last Yr	Average
=======================================	=======================================	======	========	=====			========	
GUNLOCK	10.4	10.3	10.4	j	VIRGIN RIVER	5	168	125
LAKE POWELL	24322.0	19321.0	20692.0		PAROWAN	2	165	132
QUAIL CREEK	40.0	37.1	39.0		ENTERPRISE TO NEW HARMONY	2	374	93
UPPER ENTERPRISE	10.0	5.5	7.9	0.8	COAL CREEK	2	144	113
LOWER ENTERPRISE	2.6	1.0	0.5	0.6	ESCALANTE RIVER	2	241	162
				į	E. GARFIELD, KANE, WASHIN	9	190	128
======================================		=======	=== <b>===</b> ===		:====================================	=======	=======	

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH As of MARCH 1, 1997

SNOW COURSE		THE	N)	11111									
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
AGUA CANYON SNOTEL	8900	3/01	,	8.55	5.2	,	DRY BREAD POND SNOTL	8350	3/01		29.48	17.9	16.0
ALTA CENTRAL	8800	3/03	129	44.4	39.0	32.0	DRY FORK SNOTEL	7160	3/01	1	16.25	13.6	1
ASHLEY TWIN LAKES	10500				1	13.4	EAST SHINGLE LAKE	9800				į	24.3
BEAVER DAMS SNOTEL	8000	3/01	ı	12.38	10.0	9.5	EAST WILLOW CREEK SN	8250	3/01	ı	10.15	4.6	6.0
BEAVER DIVIDE SNOTL	8280	3/01	ı	15.58	15.0	10.0	FARMINGTON CANYON L.	0569	2/25	16	26.0	19.9	19.6
BEN LOMOND PK SNOTE	8000	3/01	1	67.78	32.9	33.0	FARMINGTON CN SNOTEL	8000	3/01	1	46.95	26.8	23.6
BEN LOMOND TR SNOTL	0009	3/01	1	30.75	16.8	18.0	FARNSWORTH LK SNOTEL	0096	3/01	ŀ	19.48	13.3	15.5
BEVAN'S CABIN	6450	2/25	31	9.6	7.3	9.4	FISH LAKE	8700	2/26	35	8.1	5.3	7.1
BIG FLAT SNOTEL	10290	3/01	ı	22.58	14.0	14.1	FIVE POINTS LAKE SNO	10920	3/01	,	22.28	16.3	13.6
BIRCH CROSSING	8100	2/27	28	0.6	3.8	6.3	FRANCES FLATS	6700	2/27	7.1	23.4	20.9	16.1
BLACK FLAT-U.M. CK S	9400	3/01	1	14.35	7.3	7.9	G.B.R.C. HEADQUARTER	8700	2/26	56	18.0	12.4	13.8
BLACK'S FORK GS-EF	9340	3/01	35	9.6	11.1	7.6	G.B.R.C. MEADOWS	10000	3/01	95	28.8	21.1	19.2
BLACK'S FORK JUNCIN	8930	3/01	40	8.6	11.1	7.5	GARDEN CITY SUMMIT	7600	2/25	57	18.8	12.4	14.7
BOX CREEK SNOTEL	9800	3/01	1	14.4S	11.3	e. 8.	GEORGE CREEK	8840	2/24	72	26.2	18.4	17.4
BRIAN HEAD	10000	2/26	09	19.5	12.1	16.5	GOOSEBERRY R.S.	8400	2/26	41	11.8	8.2	9.6
BRIGHTON CABIN	8700	2/28	108	34.2	27.7	23.2	GOOSEBERRY R.S. SNOT	7900	3/01	ı	9.38	6.3	9.0
BRIGHTON SNOTEL	8750	3/01	1	27.58	23.2	18.0	HARDSCRABBLE SNOTEL	7250	3/01	ı	25.75	19.8	17.1
BROWN DUCK SNOTEL	10600	3/01	1	21.85	16.7	15.1	HARRIS FLAT SNOTEL	7700	3/01	,	8.25	2.9	5.7
BRYCE CANYON	8000	2/28	19	4.5	1.1	4.3	HAYDEN FORK SNOTEL	9100	3/01	1	19.08	19.5	13.7
BUCK FLAT SNOTEL	9800	3/01	1	28.85	20.4	13.7	HENRY'S FORK	10000	3/01	55	12.9	10.8	11.2
BUCK PASTURE	9700	3/01	99	17.0	18.6	12.9	HEWINTA SNOTEL	9500	3/01	1	12.48	14.5	8.5
BUCKBOARD FLAT	0006	3/03	64	17.8	4.2	10.6	HICKERSON PARK SNOTE	9100	3/01	1	7.05	3.7	5.0
BUG LAKE SNOTEL	7950	3/01		29.68	20.7	17.0	HIDDEN SPRINGS	5500	2/27	18	4.8	8.1	6.4
BURT'S-MILLER RANCH	7900	3/01	31	5.9	5.6	4.6	HOBBLE CREEK SUMMIT	7420	2/26	28	19.7	16.8	12.7
CAMP JACKSON SNOTEL	8600	3/01		23.15	3.4	10.4	HOLE-IN-ROCK SNOTEL	9150	3/01	1	7.48	5.9	4.5
CASTLE VALLEY SNOTL	9580	3/01	1	15.28	8.4	10.1	HORSE RIDGE SNOTEL	8260	3/01	t	35.58	25.3	19.9
CHALK CK #1 SNOTEL	9100	3/01	ı	29.48	24.6	18.6	HUNTINGTON-HORSESHOE	9800	3/01	86	30.9	18.8	19.9
CHALK CK #2 SNOTEL	8200	3/01	ı	20.18	11.9	12.3	INDIAN CANYON SNOTEL	0016	3/01		16.65	9.1	8.9
CHALK CREEK #3	7500	3/01	42	9.5	7.0	9.9	JOHNSON VALLEY	8850	2/26	28	7.6	6.0	6.1
CHEPETA SNOTEL	10300	3/01		14.48	9.5	10.8	KILFOIL CREEK	7300	2/25	62	20.0	15.1	12.1
CITY CREEK	7500	2/27	91	32.4	29.0	23.5	KILLYON CANYON	6300	3/03	36	1.6	12.3	1
CLEAR CK RIDG #1 SNT	9200	3/01	ı	30.08	19.1	15.8	KIMBERLY MINE SNOTEL	9300	3/01	1	17.05	11.7	11.6
CLEAR CK RIDG #2 SNT	8000	3/01	,	20.68	13.2	11.3	KING'S CABIN SNOTEL	8730	3/01	,	16.08	6.1	9.3
CLEAR CREEK RIDGE #3	6600					7.4	KLONDIKE NARROWS	7400	2/25	69	23.8	21.8	17.0
COLD WATER SPRINGS	6030				1	,	KOLOB SNOTEL	9250	3/01	,	21.55	13.7	16.7
CORRAL	8200				ı	ı	LAKEFORK #1 SNOTEL	10100	3/01		18.55	12.2	9.5
CURRANT CREEK SNOTEL	8000	3/01	1	13.48	11.3	9.5	LAKEFORK BASIN SNOTE	10900	3/01	ı	25.35	23.3	18.0
DANIELS-STRAWBERRY S	8000	3/01	1	27.05	19.7	15.5	LAKEFORK MOUNTAIN #3	8400	3/01	51	11.4	6.2	5,8
DESERET PEAK	9250	2/28	9/	22.0	14.7	14.5	LAMBS CANYON	7400	2/26	64	20.2	18.4	14.3
DESERET PEAK AM	9250	2/28	29	20.6	14.0	13.3	LASAL MOUNTAIN LOWER	8800	3/04	40	10.2	6.3	7.6
DESERET PEAK SNOTEL	9250	3/01	1	22.1S	14.6	16.4	LASAL MOUNTAIN SNOTE	9850	3/01	ı	13.25	10.0	10.9
DILL'S CAMP SNOTEL	9200	3/01	•	19.98	13.4	11.9	LILY LAKE SNOTEL	0 10 0	1/01		000		
								000	70/6	ı	C7.0T	15.0	4.01

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	MONS	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
LITTLE BEAR SNOTEL	6550	3/01		23.48	9.7	13.0	THISTLE FLAT	8500				ı	1
LITTLE GRASSY SNOTEL	0019	3/01	,	1.58	6.0	2.2	TIMBERLINE	9100				•	ı
LONG FLAT SNOTEL	8000	3/01		7.15	1.4	7.0	TIMPANOGOS DIVIDE SN	8140	3/01	ı	38.15	18.8	20.4
LONG VALLEY JCT. SNT	7500	3/01	1	7.48	2.0	4.3	TONY GROVE LK SNOTEL	8400	3/01	ı	51.2S	38.3	29.3
LOOKOUT PEAK SNOTEL	8200	3/01		33.48	27.7	25.4	TONY GROVE R.S.	6250	2/25	51	15.8	13.8	10.8
LOST CREEK RESERVOIR	6130	2/25	35	11.2	8.5	5.4	TRIAL LAKE	0966	3/01	103	36.0	25.1	20.3
MAMMOTH-COTTONWD SNT	8800	3/01	1	31.38	18.8	16.6	TRIAL LAKE SNOTEL	0966	3/01	ı	33.98	26.0	21.2
MERCHANT VALLEY SNOT	8750	3/01	1	18.85	11.4	9.3	TROUT CREEK SNOTEL	9400	3/01		10.75	5.2	8.0
MIDDLE CANYON	7000	2/25	44	14.0	10.5	11.5	UPPER JOES VALLEY	8900	3/01	99	13.9	10.7	9.3
MIDWAY VALLEY SNOTEL	9800	3/01		21.95	14.1	17.9	VERNON CREEK SNOTEL	7500	3/01		19.38	6.5	9.5
MILL CREEK	6950	2/26	7.0	21.8	19.2	17.6	VIPONT	7670	2/24	59	22.0	13.4	12.3
MILL-D NORTH SNOTEL	8960	3/01	,	33.18	24.9	19.8	WEBSTER FLAT SNOTEL	9200	3/01		12.38	9.7	12.4
MILL-D SOUTH FORK	7400	2/28	16	23.2	22.1	16.7	WHITE RIVER #1 SNOTE	8550	3/01	,	22.38	14.2	11.6
MINING FORK SNOTEL	8000	3/01	1	26.78	17.8	14.4	WHITE RIVER #3	7400	3/01	39	10.5	10.3	7.8
MONTE CRISTO SNOTEL	8960	3/01	1	38.15	31.4	23.5	WIDISOE #3 SNOTEL	9500	3/01	1	14.0S	4 8	8.5
MOSBY MIN. SNOTEL	9500	3/01	ı	17.58	5.8	7.9	WRIGLEY CREEK	0006	3/01	99	15.1	10.2	9.6
MT.BALDY R.S.	9500	2/26	80	27.0	20.3	19.6	YANKEE RESERVOIR	8700	2/26	40	11.4	5.7	7.8
MUD CREEK #2	8600	3/01	92	21.1	15.6	11.8	NOTE:						
OAK CREEK	7760	2/26	36	10.5	6.4	10.3	The S flag following Water Content for SNOTEL	ter Cor	tent for		sites indi	cates t	sites indicates telemetered
PANQUITCH LAKE	8200	2/26	17	4.2	1	4.4	data. The Depth reading preceeding S flagged	g prece	eding S f	lagged	data was m	easured	data was measured around the
PARLEY'S CANYON SNOT	7500	3/01	ı	17.65	16.8	16.0	snow pillows at the time of the ground survey	te of th	e ground		and may not be the	t be th	e same date as
PARLEY'S CANYON SUM.	7500	2/26	65	20.7	20.9	15.7	the telemetered value.						
PAYSON R.S. SNOTEL	8050	3/01	1	17.28	14.5	16.2							
PICKLE KEG SNOTEL	0096	3/01	ı	17.18	13.6	13.5							
PINE CREEK SNOTEL	8800	3/01	1		14.6	15.5							
RED PINE RIDGE SNOTE	9200	3/01	ı	17.75	15.7	14.3							
REDDEN MINE LOWER	8500	3/01	74	22.3	17.0	15.0							
REES'S FLAT	7300	2/26	47		7.9	10.9							
ROCK CREEK SNOTEL	7900	3/01		15.53	9.0	7.5							
ROCKY BN-SETTLEMT SN	8900	3/01	1	28.85	15.2	20.0							
SEELEY CREEK SNOTEL 1	10000	3/01	•	16.98	11.1	11.9							
SILVER LAKE (BRIGHT.)	8730	2/28	96	32.9	25.4	20.3							
SMITH MOREHOUSE SNTL	7600	3/01		17.58	16.0	11.9							
SNOWBIRD SNOTEL	9700	3/01	ı	46.08	35.7	29.0							
SPIRIT LAKE	10300	3/01	54	13.1	8.2	10.1							
SQUAW SPRINGS	9300	2/26	32	8.1	6.3	6.4							
STEEL CREEK PARK SNO 1	10100	3/01	ı	14.58	16.0	12.6							
STILLWATER CAMP	8550	3/01	48	13.2	12.8	9.8							
STRAMBERRY DIVIDE SN	8400	3/01	ı	29.35	18.6	16.4							
STUART R.S.	7950				,	6.3							
SUSC RANCH	8200	2/27	23	8.5	5.0	8,0							
TALL POLES	8800	2/27	49	16.0	7.6	11.7							
THAYNES CANYON SNOTL	9200	3/01	1	28.55	24.1	17.3							

# UTAH SURFACE WATER SUPPLY INDEX

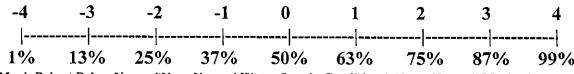
NRCS SNOW SURVEYS - As of Mar 1, 1997

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero indicating a median water supply as compared to historical analysis.

SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage alone. The SWSI index allows comparison of water availability between basins/regions for drought or flood severity analysis.

Basin or Region	SWSI/% Value	Most Recent Year With Similar SWSI Value	Agricultural Water Shortage May Occur if SWSI less than
Bear River	2.2 / 76%	75,67,74,80	-3.8
Ogden River	2.9 / 85%		
Weber River	2.5 / 80%		
Tooele Valley	NA		
Provo	NA		
North Slope	NA		
West Uintah Basin	3.6 / 93%	86,87,95	
East Uintah Basin	2.4 / 79%		
Price River	2.7 / 83%	68,75,69,80	
San Rafael	3.2 / 88%	80,86,84,83	
Moab	0.0 / 50%	94,92,86,85	
Upper Sevier River	1.5 / 68%	68,82,86,88	
Lower Sevier River	NA		
Beaver River	2.3 / 78%	82,84,73,86	
Virgin River	2.4 / 79%	88,92,95,93	

### SWSI SCALE AND PERCENT CHANCE OF NON-EXCEEDANCE



Much Below Below Normal Near Normal Water Supply Conditions Above Normal Much Above

The percent chance of non-exceedance is a probability that can be best thought of as a simple scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and 50 representing average conditions. Each SWSI unit represents about 12% of historical occurences scaled between -4 and + 4, comparable to the Palmer Drought Index. Normal water supply conditions comprise the middle third (33%) of the scale with dry and wet categories occupying a third (33%) at each end of the spectrum.

Many agencies contribute data to calculate SWSI values: National Weather Service, Bureau of Reclamation, Utah State Water Resources and many private Corporations and Individuals.

Issued by

Paul W. Johnson Chief Natural Resources Conservation Service U.S. Department of Agriculture Released by

Phillip J. Nelson State Conservationist Natural Resources Conservation Service Salt Lake City, Utah



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# Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT





Natural Resources Conservation Service

# Utah Basin Outlook Report April 1, 1997



# **Basin Outlook Reports**

# Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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# How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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# STATE OF UTAH GENERAL OUTLOOK Apr 1, 1997

#### **SUMMARY**

March moved the climatic pendulum from the extreme wet of the early water year past a below normal February right off the other side to extreme dry and warm conditions exactly the scenario needed to mitigate the potential of extremely high streamflow later this spring. March was dry enough that Snow Surveyors out this past week could still see the core holes measured the previous month. There were minimal snowpack accumulations in northern Utah during March, while in southern Utah, snowpacks were decimated by the warm dry weather. Snowpacks on the Virgin Basin fell 59% relative to the previous month and are now below average, a phenomenal flip flop in water supply conditions. Snowpacks in northern Utah had started some melting, but this was quickly stopped by the recent storms and cooler temperatures. April climatic conditions will play a crucial role in determining the spring runoff conditions. An April that turns off very warm and dry will mitigate potential high flows, one that is cool and wet will exacerbate existing conditions. Areas of greatest concern are on the Bear and Weber River systems. Precipitation across Utah's mountains ranged from 6% to 61% of average. Most areas were much below normal. Water supply conditions remain in excellent condition across the state with the exception of the Virgin which has fallen to below normal. Most streams should have high flows that last well into the summer months. Reservoirs should easily fill, even Bear Lake and Strawberry should see much higher levels than those of the past ten years. Given the extraordinary snowpacks on the Bear and Weber Rivers, there continues to be some potential for agricultural inundation this spring. Those areas prone to agricultural flooding are likely to experience it again this season. Climatic conditions during April and early May will determine the potential and extent of any inundation.

#### **SNOWPACK**

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 124% of normal, down 36% relative to last month and about 1.2 times those of last year. Snowpacks in the north are much above average ranging from 123% to 142% of normal. In the south, snowpacks range from 69% to 95% of average. In southeastern Utah, an area hard hit by drought last year, snowpacks range from 73% to 190 % of average.

#### **PRECIPITATION**

Mountain precipitation in March, as measured by the NRCS SNOTEL system, was below normal at 38% of average statewide. This brings the seasonal accumulation (Oct-Mar) to 126% of average. Precipitation was highest on the Bear (61%) and lowest over the Virgin at 6% of normal.

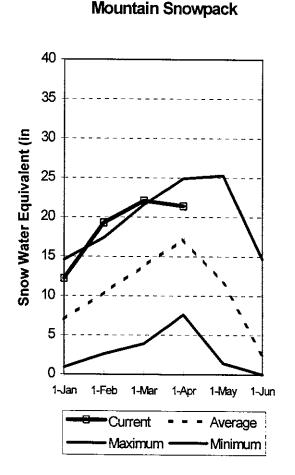
National Weather Service precipitation figures show most of the storm activity occurred during the first few days and the last couple of days of March. Some stations recorded no precipitation and many others, only a trace. Some of the higher percentages occurred in the north: Trenton - 77%, Randolph - 74%, Heber City - 69%, Alta and Cottonwood Weir - 66% of average.

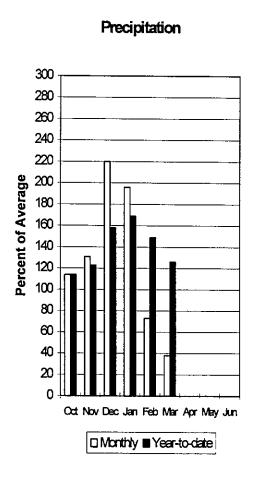
#### RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 76% of capacity. Some reservoirs are releasing water in expectation of high flows, while others are full and spilling.

#### **STREAMFLOW**

Expected streamflow for snowmelt runoff range from below and near average to near record levels throughout Utah. In the north, much above average to near record conditions prevail whereas in the south, below and near normal streamflow is expected. Streamflows in northern Utah could have much higher peak flows and longer duration than normal. There is potential for some agricultural inundation in northern Utah.





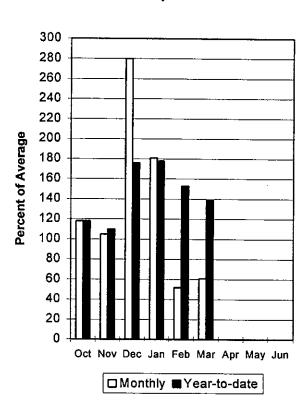
# Bear River Basin Apr 1, 1997

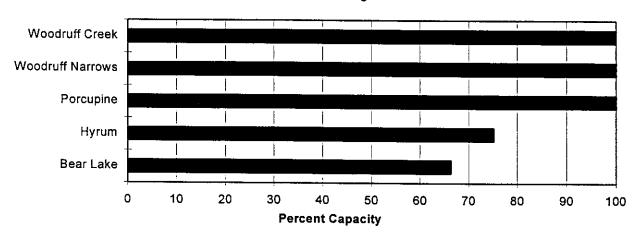
Snowpack on the Bear River Basin is much above average at 140% of normal, ranging from 51% to 179% at specific sites. The record maximum April 1 snowpack on the Bear is 152% of normal. March snowpack increase was only 35% of normal. March precipitation was below normal at 61%, which brings the seasonal accumulation (Oct-Mar) to 139% of average. Water supply conditions are excellent and much above average runoff is expected with a high potential for agricultural inundation. Reservoir storage is at 68% capacity.

#### **Mountain Snowpack**

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Jan 1-Feb 1-Mar 1-May **Current** Average Maximum Minimum

## Precipitation





# BEAR RIVER BASIN

Streamflow Forecasts - April 1, 1997

		<b>&lt;&lt;====</b>	Drier ====	== Future Co	onditions ==	===== Wetter	====>>	
Forecast Point	Forecast	=======	========	= Chance Of I	Exceeding * =	=========	   =======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
BEAR R nr UT-WY State Line	APR-JUL	120	140		   135	======================================	200	======== 115
BEAR R nr Woodruff (2)	APR-JUL	105	164	205	138	246	305	149
BIG CK nr Randolph	APR-JUL	2.38	4.54	6.00	158	7.46	9.62	3.80
BEAR R nr Randolph, UT	APR-JUL	100	139	[   165	140 l	191	230	118
SMITHS FORK or Border, WY	APR-JUL	127	141	150	147	159	173	102
THOMAS FK nr WY-ID State Line	APR-JUL	28	38	46	139	56	74	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	318	373	   410	142	447	502	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	11.6	14.6	17.0	139	19.8	25	12.2
CUB R nr Preston	APR-JUL	58	63	67	143	71	76	47
LOGAN R nr Logan	APR-JUL	162	181	   195	182	210	235	107
BLACKSMITH Fk nr Hyrum	APR-JUL	75	84	90	167	97	108	54

Reservoir Sto	BEAR RIVER BASIN rage (1000 AF) - End	of March	l	 	BEAR   Watershed Snowpac	RIVER BASIN k Analysis -	April 1,	1997
Reservoir	Usable   Capacity	*** Usa This Year	ble Stora Last Year	age ***         Avg	Watershed	Number of Data Sites	This Yea	======= r as % of ======== Average
BEAR LAKE		945.3	450 F	4002.4	***************************************	,	=======	
HYRUM	1421.0	11.5	658.5 15.3	1002.1	BEAR RIVER, UPPER (abv		106	134
PORCUPINE	11.3	11.3	11.3	5.0	BEAR RIVER, LOWER (blw LOGAN RIVER	Ha 7	138 141	148 157
WOODRUFF NARROWS	57.3	57.3	53.0		RAFT RIVER	2	128	137
WOODRUFF CREEK	4.0	4.0	4.0		BEAR RIVER BASIN	13	123	142
	=======================================	=======	========	.========			=======	========

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

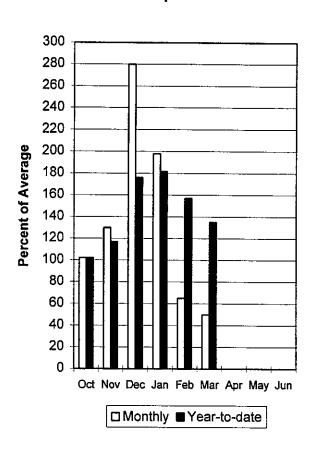
# Weber and Ogden River Basins Apr 1, 1997

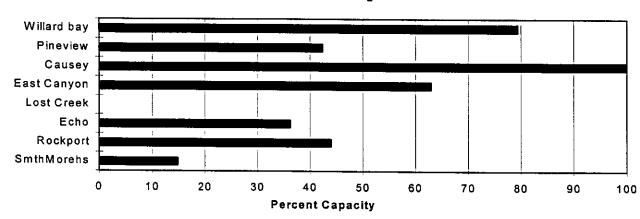
Snowpack on the Weber and Ogden Watersheds is at 142% of average. Individual sites range from 89% to 168% of average. This is the second highest April 1 snowpack on the Weber ever. The March snowpack increase was only 16% of normal. Precipitation during March was below normal at 50% of average, bringing the seasonal accumulation (Oct-Mar) to 135% of normal. Reservoir storage on the Weber system is at 57% of capacity. General water supply conditions are excellent. Streamflows could have much higher peaks and longer duration than normal, with a high potential for agricultural inundation.

# **Mountain Snowpack**

# 40 35 30 Snow Water Equivalent (in) 25 20 15 10 5 0 1-Feb 1-Jan 1-Mar 1-May 'Current Average Maximum Minimum

# Precipitation





#### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - April 1, 1997

	=======================================			=========	==========	=======================================		
		<<=====	Drier ====	== Future C	onditions ==	===== Wetter	=====>>	
Forecast Point	Forecast	=======	.=======	= Chance Of	Exceeding * =	======================================	 	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
=======================================	=======================================	<b></b>	========	========	========	=========	========	
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	38	42	45	150	48	52	30
WEBER R nr Oakley	APR-JUL	139	154	165	135	176	191	122
ROCKPORT RESERVIR inflow	APR-JUL	158	177	190	142	203	222	134
CHALK CK at Coalville, Ut	APR-JUL	49	60	   68	155	76	87	44
WEBER R nr Coalville, Ut	APR-JUL	159	180	195	143	210	231	136
ECHO RESEROIR Inflow	APR-JUL	195	234	260	148	286	325	176
LOST CK Res Inflow	APR-JUL	18.2	23	l 26	151	29	34	17.2
E CANYON CK nr Morgan	APR-JUL	33	38	1 42	140	46	51	30
WEBER R at Gateway	APR-JUL	426	467	495	143	523	564	347
S FORK OGDEN R nr Huntsville	APR-JUL	85	92	   97	154 l	102	109	63
PINEVIEW RESERGIR Inflow	APR-JUL	155	176	190	153	204	225	124
WHEELER CK nr Huntsville	APR-JUL	8.47	9.38	10.00	161	10.62	11.53	6.20

WEBER & OGDEN	JATERSHEDS i	n Utah		]	WEBER & OGDEN	WATERSHEDS	in Utah	
Reservoir Storage (10	00 AF) - End	of March		1	Watershed Snowpack	Analysis -	April 1, 1	1997
Reservoir	Usable     Capacity	*** Usa This	======= ble Stora Last	ge ***   	Watershed	Number of	This Year	
	j	Year	Year	Avg		Data Sites	Last Yr	Average
######################################		=======		======= =			=======	
CAUSEY	7.1	7.1	2.0	2.6	OGDEN RIVER	4	147	152
EAST CANYON	49.5	31.2	34.7	36.6	WEBER RIVER	8	114	138
ECHO	73.9	26.8	30.8	49.5	WEBER & OGDEN WATERSHED	S 12	125	143
LOST CREEK	22.5	0.0	14.6	13.3				
PINEVIEW	110.1	46.7	54.8	55.6				
ROCKPORT	60.9	26.8	34.7	30.9				
WILLARD BAY	215.0	170.8	178.6	125.3				
=======================================			=======			.=======	=========	:=======

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

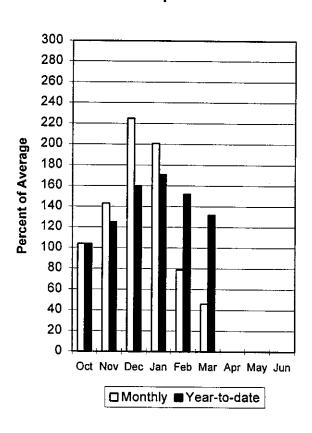
# Utah Lake, Jordan River & Tooele Valley Basins Apr 1, 1997

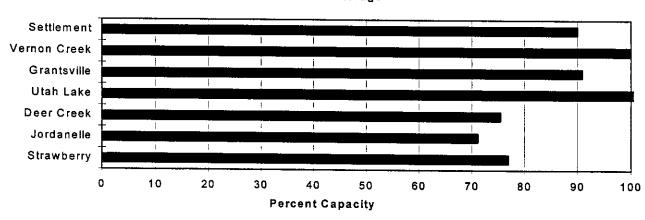
Snowpacks over these watersheds are above average at 127% of normal. Individual sites range from 68% to 158% of average. March brought a net loss (-8%) of snowpack relative to normal over this basin. Precipitation during March was below normal at 46% of normal, bringing the seasonal accumulation (Oct-Mar) to 132% of average. Reservoir storage is at 88% of capacity. Water supply conditions are above average and above average peak flows, with longer flow durations, can be expected. There is some potential for agricultural inundation.

#### Mountain Snowpack

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Jan 1-Feb 1-Маг 1-May 'Current Average Maximum Minimum

# **Precipitation**





# UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - April 1, 1997

	========	=========	========	======================================		<u></u>	*========	************
		<<======	Drier ====	≔≂ Future Co	onditions ===	==== Wetter	. ====>>	
Forecast Point	Forecast	========	=======================================	= Chance Of E	xceeding * ==	=======================================	  -======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)		(% AVG.)	(1000AF)	(1000AF)	(1000AF)
PAYSON CK nr Payson	APR-JUL	1.45	3.37	4.40	: ======== 100	5.43	7.57	4.40
SPANISH FORK or Castilla	APR-JUL	42	76	96	130	116	150	74
HOBBLE CK nr Springville	APR-JUL	19.9	23	25	133	27	30	18.8
PROVO R nr Hailstone	APR-JUL	116		152	139		189	109
PROVO R below Deer Creek Dam	APR-JUL	123	155	175	137	195	227	128
AMERICAN FORK nr American Fk.	APR-JUL	42	46	49	153	52	56	32
UTAH LAKE inflow	APR-JUL	311		   460	142		609	324
L COTTONWOOD CRK or SLC	APR-JUL	38	43	46	118 j	49	54	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	37	43	46	121	49	55	38
PARLEY'S CK nr SLC	APR-JUL	7.6	12.8	!   15.9	100	19.0	24	15.9
MILL CK nr SLC	APR-JUL	4.55	6.23	7.30	112	8.37	10.27	6.50
DELL FK nr SLC	APR-JUL	4.19	6.74	8.20	116	9.66	12.50	7.10
EMIGRATION CK nr SLC	APR-JUL	1.01	3.00	   4.20	100	5.40	7.39	4.20
CITY CK nr SLC	APR-JUL	5.42	7.72	9.10	110	10.48	12.80	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	1309	1783	2200	164	2714	3697	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	1322	2320	   3400	148	4982	8748	2300
S WILLOW CK nr Grantsville	APR-JUL	2.40	3.59	4.40	142	5.21	6.40	3.10

UTAH LAK	CE, JORDAN RIVER & TOOE	E VALLEY			UTAH LAKE, JORD	AN RIVER & TOO	DELE VALLEY
Reservoir St	orage (1000 AF) - End	of March			Watershed Snowpa	ck Analysis -	April 1, 1997
=======================================	=======================================		=======				
	Usable	*** Usabl	e Storage	***		Number	This Year as % of
Reservoir	Capacity	This	Last		Watershed	of	=======================================
		Year	Year	Avg		Data Sites	Last Yr Average
=======================================	=======================================	=======	=======	=====	=======================================	=========	=======================================

===									
VER	RNON CREEK	0.6	0.6	0.6	0.5				
UT	AH LAKE	870.9	950.8	914.2	722.9	UTAH LAKE, JORDAN RIVER &	16	114	127
STR	RAWBERRY-ENLARGED	1105.9	850.7	706.1		TOOELE VALLEY WATERSHEDS	4	135	122
SET	ITLEMENT CREEK	1.0	0.9	0.9	0.6	JORDAN RIVER & GREAT SALT	5	109	133
	ANTSVILLE	3.3	3.0	3.3		PROVO RIVER	4	115	135
	ER CREEK	149.7	112.9	119.7	97.9	PROVO RIVER & UTAH LAKE	7	111	124

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

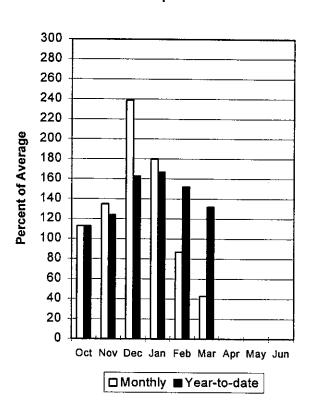
# Uintah Basin and Dagget SCD's Apr 1, 1997

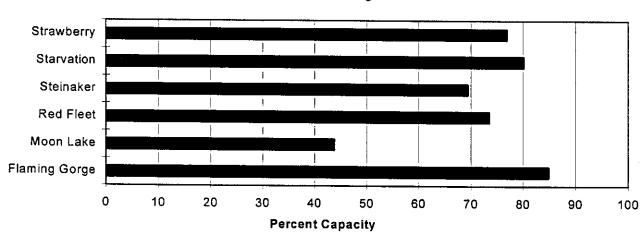
Snowpacks across the Uintah Basin and North Slope areas are divided with a north to south split. The north is near average at 101% and the southern area much above average at 131% of average. March brought a net decrease (-6%) in snowpack relative to normal. Precipitation during March was below average at 43% of normal, bringing the seasonal accumulation (Oct-Mar) to 132% of average. Reservoir storage is at 74% of capacity. Water supply conditions are excellent with much above average streamflow expected, high peak flows and a high potential for agricultural inundation.

## Mountain Snowpack

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 1-Feb 1-Mar 1-May Current Average Maximum Minimum

# Precipitation





# UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - April 1, 1997

						=======================================	:========	*********
		<<====== 	: Drier ====	== Future Co	onditions =	===== Wetter	· ====>>	
Forecast Point	Forecast	=======	:=========	Chance Of E	Exceeding *	=======================================	 	
	Period	90%	70%		Probable)	1 30%	10% i	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
MEEKS CABIN RESERVOIR Inflow								
STATE LINE RESERVOIR INFLOW	APR-JUL APR-JUL	91 27	99	105	109	111	119	96
HENRYS FORK or Manila		23	29	32	107	36	41	30
ACRES FORE III MANTES	APR-JUL	10.5	25	34	81	44	58	42
FLAMING GORGE RES INFLOW	APR-JUL	1363	1598	1700	142	l 1802	2045	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	16.3	20	23	116	26	30	19.8
ASHLEY CK nr Vernal	APR-JUL	49	59	65	128	71	81	51
WF DUCHESNE RIVER or Hanna	APR-JUL	30	32 I	36	139	   41	42	24
DUCKESNE R nr Tabiona	APR-JUL	118	131	140	133	1 149	42 162	26 105
ROCK CK nr Mountain Home	APR-JUL	96	107	115	122	123	134	94
						İ		
UPPER STILLWATER RESV inflow	APR-JUL	81	94	102	126	111	123	81
DUCHESNE R abv Knight Diversion	APR-JUL	193	224	245	130	266	297	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	65	79	90	153	102	120	59
CURRANT CREEK RESV Inflow	APR-JUL	27	31	33	157	l I 35	39	21
STARVATION RESERVOIR inflow	APR-JUL	147	170	185	158	200	223	117
MOON LAKE Inflow	APR-JUL	70	80	86	125	92	102	69
YELLOWSTONE R nr Altonah	APR-JUL	63	74 I	81	125	88	99	65
DUCHESNE R at Myton	APR-JUL	299	359 I	400	152	65   441	501	263
WHITEROCKS R nr Whiterocks	APR-JUL	47	57	64	110	<del>  71</del>   71	81	58
UINTA R nr Neola	APR-JUL	68	83 l	93	109	   103	118	or
DUCKESNE R nr Randlett	APR-JUL	264	404	500	152	103 596	736	85 328

	UINTAH	BASIN	8	DAGGE	T SC	D'S	;	
Reservoir	Storage	. /1000	١.	MEN - (	End	٥f	Mana	

UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - April 1, 1997

	.==============	=======	========	=======	=======================================	=======	=======	=======
Reservoir	Usable   Capacity				Watershed	iumber of	This Yea	r as % of
	ļ	Year	Year	A∨g	Dat	a Sites	Last Yr	Average
		======:	=========	======	=======================================	======	=======	
FLAMING GORGE	3749.0	3184.9	3151.0		UPPER GREEN RIVER in UTAH	6	96	101
MOON LAKE	49.5	21.7		32.0	ASHLEY CREEK	2	145	100
RED FLEET	25.7	18.9	21.5	j	BLACK'S FORK RIVER	2	73	97
STEINAKER	33.4	23.2	32.8	22.6	SHEEP CREEK	1	144	123
STARVATION	165.3	132.6	148.9	114.1	DUCHESNE RIVER	11	118	131
STRAWBERRY-ENLARGED	1105.9	850.7	706.1	j	LAKE FORK-YELLOWSTONE CRE	4	112	129
				I	STRAWBERRY RIVER	4	112	131
				1	UINTAH-WHITEROCKS RIVERS	2	157	127
				1	UINTAH BASIN & DAGGET SCD	17	112	123

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

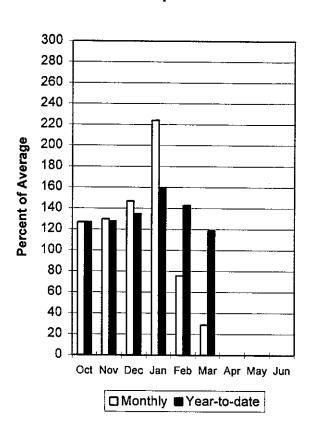
# Carbon, Emery, Wayne, Grand and San Juan Co. Apr 1, 1997

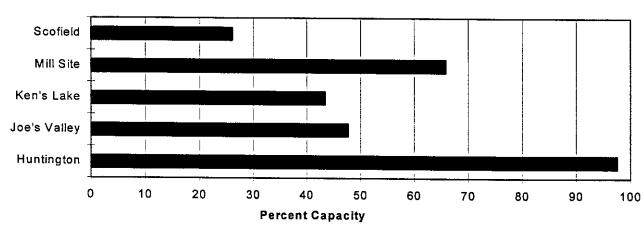
Snowpacks in this region are at 125% of average. The Blue Mountains, have 10 times more snow than last year. Individual sites range from 73% to 191% of normal. March brought a significant decrease in snowpacks instead of an increase. Precipitation during March was much below average at 29%, bringing the seasonal accumulation (Oct-Mar) to 119% of normal. Reservoir storage is at 42% of capacity. General water supply conditions are above average throughout the region and above average flows are expected. There is some potential of agricultural inundation.

### Mountain Snowpack

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Jan 1-Feb 1-Mar 1-May 1-Jun Current Average Maximum Minimum

## **Precipitation**





# CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - April 1, 1997

			: Drier ====	== Future Co	onditions ===	===== Wetter	· =====>>	===========
Forecast Point	Forecast		:=========	= Chance Of E	exceeding * ==	=======================================	=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
			========	==========			========	=======================================
GOOSEBERRY CK nr Scofield	APR-JUL	13.5		17.0	145		21	11.7
SCOFIELD RESV Inflow	APR-JUL	32		60	136		88	44
WHITE R blw Tabbyune Ck	APR~JUL	16.1		23	123		30	18.7
GREEN R at Green River, UT	APR-JUL	3498	4219	   4500	143	4781	5483	3151
ELECTRIC LAKE inflow	APR-JUL	19.8	21	22	146	23	24	15.1
HUNTINGTON CK nr Huntington	APR-JUL	31		55	134		79	41
JOE'S VALLEY RESV Inflow	APR-JUL	46	56	l   63	119 I	70	80	53
FERRON CK nr Ferron	APR-JUL	39	45	49	126	53	59	39
COLORADO R nr Cisco	APR-JUL	4339	5220	5600	136	5980	6900	4132
MILL CK at Sheley Tunnel	APR-JUL	2.72	3.57	   4.30	72 i	5.17	6.80	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	3.28	5.67	7.30	112	8.93	11.32	6.50
MUDDY CK nr Emery	APR-JUL	15.3	22	26	133	30	37	19.6
LLOYD'S RESERVOIR inflow	MAR-JUL	1.57	2.42	   3.90	135 I	5.38	7.55	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	3.15	4.95	6.40	160	8.04	10.79	4.00
SAN JUAN R nr Bluff	APR-JUL	1106	1345	1500	130	1655	1889	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of March

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - April 1, 1997

Reservoir	Usable   Capacity	*** Usab This Year	le Storag Last Year	e ***       Avg	Watershed (	Number of Data Sites	This Year	as % of
		========		======	=======================================			=======
HUNTINGTON NORTH	4.2	4.1	4.1	3.8	PRICE RIVER	3	120	144
JOE'S VALLEY	61.6	29.4	44.4	45.6	SAN RAFAEL RIVER	3	107	119
KEN'S LAKE	2.3	1.0	2.0		MUDDY CREEK	1	108	119
MILL SITE	16.7	11.0	13.4	4.6	FREMONT RIVER	3	144	108
SCOFIELD	65.8	17.2	28.0	33.3	LASAL MOUNTAINS	1	82	73
				j	BLUE MOUNTAINS	1	1039	191
				- 1	WILLOW CREEK	1	139	115
				- 1	CARBON, EMERY, WAYNE, GI	RA 13	125	125
			=======		=======================================			

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

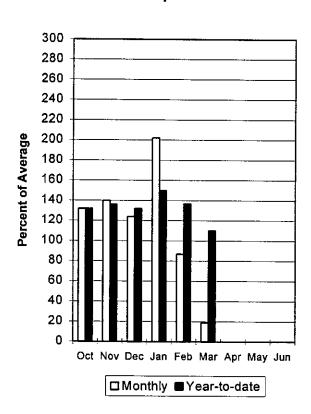
# Sevier and Beaver River Basins Apr 1, 1997

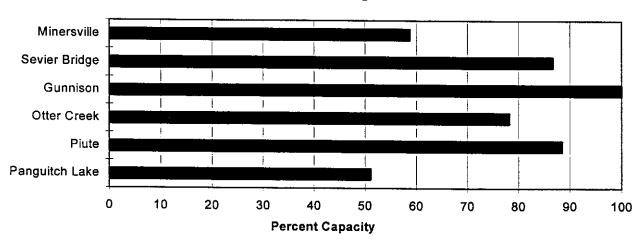
Snowpacks on the Sevier River Basin are at 95% of average, down 54% relative to last month. The Beaver River Basin is higher at 132% of normal. Individual sites range from 0% to 151% of average. March snowfall, or more accurately, the tremendous snowmelt, makes it the second worst historically. Precipitation during March was just 19% of normal, bringing the seasonal accumulation (Oct-Mar) to 110% of average. Reservoir storage is at 85% of capacity. General water supply conditions are near average and streamflows should be adequate.

# **Mountain Snowpack**

# 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Jan 1-Feb 1-Mar 1-Apr 1-May Current Average Maximum Minimum

#### Precipitation





# SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - April 1, 1997

		<<======	Drier ====	== Future C	onditions ===	===== Wetter	· ====>>	
Forecast Point	Forecast	=======	<b></b>	= Chance Of	Exceeding * ==	==========	  -======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	i	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SEVIER R at Hatch	APR-JUL	32	43	49	91	 55		54
SEVIER R nr Circleville	APR-JUL	40	55	65	87	75	90	75
SEVIER R nr Kingston	APR-JUL	43	65	71	86	77	99	83
ANTIMONY CK nr Antimony	APR-JUL	5.48	7.05	[   7.90	108	8.75	10.29	7.30
E F SEVIER R nr Kingston	APR-JUL	12.0	25	33	110	41	54	30
SEVIER R blw Piute Dam	APR-JUL	51		107	93		163	115
CLEAR CK nr Sevier	APR-JUL	12.0	17.6	   21	100	24	30	21
SALINA CK at Salina	APR-JUL	1.9	8.1	15.5	88	23	38	17.6
PLEASANT CK nr Pleasant	APR-JUL	8.33	9.46	10.10	119	10.74	12.15	8.50
EPHRAIM CK nr Ephraim	APR-JUL	8.8	11.7	   13.2	105	14.7	17.6	12.6
SEVIER R nr Gunnison	APR-JUL	14.0	151	225	94	299	435	239
CHICKEN CK or Levan	APR-JUL	3.72	4.48	5.00	106	5.52	6.28	4.70
DAK CK nr Oak City	APR-JUL	0.39	1.29	   1.90	112	2.51	3.41	1.70
BEAVER R nr Beaver	APR-JUL	18.0	26	32	123	38	46	26
MINERSVILLE RESEROIR inflow	APR-JUL	10.4	16.1	20	120	24	30	16.7

S	EVIER &	BEAVER	RIVER	BAS	INS	3
Reservoir	Storage	(1000	AF) -	End	of	March

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - April 1, 1997

								========
	Usable	*** Usa	ble Storaç	ge ***		Number	This Yea	ras % of
Reservoir	Capacity	This	Last	Ì	Watershed	of	=======	=======
	1	Year	Year	Avg	D	ata Sites	Last Yr	Average
=======================================	=========		=======	======	=======================================			========
GUNN I SON	20.3	20.3	20.3	16.3	UPPER SEVIER RIVER (sout	1 7	111	82
MINERSVILLE (RkyFd)	23.3	13.7	23.3	14.3	EAST FORK SEVIER RIVER	2	123	97
OTTER CREEK	52.5	41.1	52.5	35.8	SOUTH FORK SEVIER RIVER	5	106	76
PIUTE	71.8	63.6	71.4	46.2	LOWER SEVIER RIVER (incli	ı 6	103	96
SEVIER BRIDGE	236.0	204.6	235.0	136.2	BEAVER RIVER	2	143	132
PANGUITCH LAKE	22.3	11.4	19.4		SEVIER & BEAVER RIVER BA	s 15	112	95

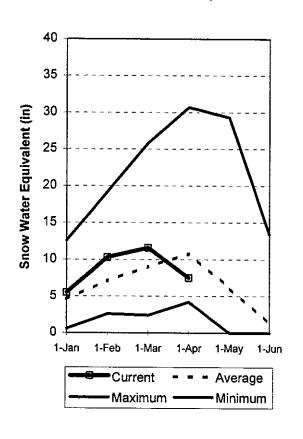
<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

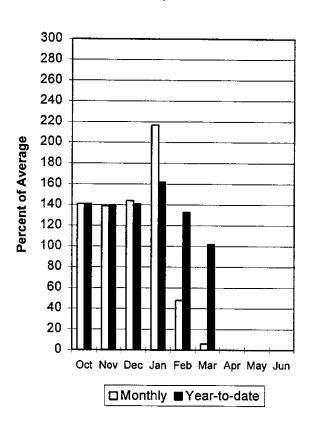
# E. Garfield, Kane, Washington, & Iron co. Apr 1, 1997

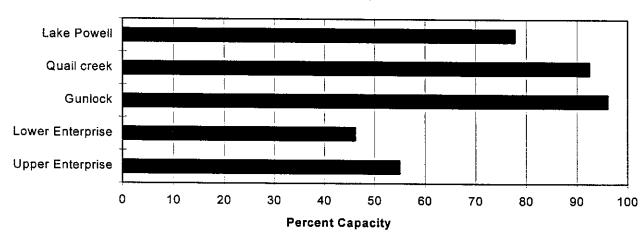
Snowpacks in this region are much below normal at 69% of average, down a huge 59% relative to last month and just slightly more than last year. March pretty well decimated snowpacks in this region. Individual sites range from 0% to 124% of average. This snowpack should produce below normal water supply the remainder of this spring. Precipitation during March was practically non-existent at 6% of average, bringing the seasonal accumulation (Oct-Mar) to 102% of normal. General water supply conditions are below average. Reservoir storage is at 85% of capacity.

# Mountain Snowpack



# Precipitation





# E. GARFIELD, KANE, WASHINGTON, & IRON Co.

Streamflow Forecasts - April 1, 1997

		<b>  &lt;&lt;====</b>	Drier ====	≐≖ Future C	onditions ==:	===== Wetter	-====>>	
Forecast Point	Forecast	========	=========	= Chance Of I	exceeding * ==	=======================================	======	
	Period	90%	70%		Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
		=======	========	=========	=======		.=======	==========
COAL CK nr Cedar City	APR-JUL	3.4	9.0	12.2	65	15.4	21	18.8
LAKE POWELL INFLOW	APR-JUL	8586	10091	11000	142	11909	13382	7735
VIRGIN R nr Hurricane	APR+JUL	11.9		47	60		82	79
SANTA CLARA R nr Pine Valley	APR-JUL	1.01		   3.50	66		5.99	5.30
E. GARFIELD, KAN	, WASHINGTON,	& IRON Co.			E. GARFIELD,	KANE, WASHIN	GTON, & IRO	======== N Co.
Reservoir Storage ('	1000 AF) - End	of March			Watershed Sno		-	
-======================================					=======================================		<b>=</b> \$======	=======================================
Reservoir	Usable   Capacity		e Storage *	*** [		Numbe	r This	Year as % of

Reservoir	Usable Capacity	•	able Storage Last Year	***       Avg	Watershed	Number of ta Sites	This Year	as % of
	*********	=======		=====		2252222		=======
GUNLOCK	10.4	10.0	10.4		VIRGIN RIVER	5	101	62
LAKE POWELL	24322.0	18918.0	20220.0	[	PAROWAN	2	107	81
QUAIL CREEK		NO REP	ORT	į	ENTERPRISE TO NEW HARMONY	2	0	0
UPPER ENTERPRISE	10.0	5.5	7.8	j	COAL CREEK	2	99	61
LOWER ENTERPRISE	2.6	1.2	0.5	j	ESCALANTE RIVER	2	170	114
				ĺ	E. GARFIELD, KANE, WASHIN	9	118	69
=======================================			=========			=======		======

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH As of APRIL 1, 1997

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
AGUA CANYON SNOTEL	8900	4/01	ı	2.08	2.4	ı	DRY BREAD POND SNOTL	8350	4/01	1	29.88	21.1	19.9
ALTA CENTRAL	8800	4/01	103	42.1	42.9	38.7	DRY FORK SNOTEL	7160	4/01	,	15.78	18.7	ı
ASHLEY TWIN LAKES	10500				ı	16.8	EAST SHINGLE LAKE	9800				·	29.0
BEAVER DAMS SNOTEL	8000	4/01	ı	6.78	9.9	12.3	EAST WILLOW CREEK SN	8250	4/01	ı	8.25	5.9	7.1
BEAVER DIVIDE SNOTL	8280	4/01		13.88	16.7	11.4	FARMINGTON CANYON L.	6950	3/27	72	29.2	26.4	24.4
BEN LOMOND PK SNOTL	8000	4/01	1	68.75	37.5	40.8	FARMINGTON CN SNOTEL	8000	4/01	1	51.68	34.0	31.1
BEN LOMOND TR SNOTL	0009	4/01	1	28.65	18.4	20.D	FARNSWORTH LK SNOTEL	0096	4/01	ı	21.75	17.6	20.5
BEVAN'S CABIN	6450	3/27	26	10.1	11.1	11.7	FISH LAKE	8700	3/26	18	7.0	6.9	8.3
BIG FLAT SNOTEL	10290	4/01	ı	22.55	15.5	18.9	FIVE POINTS LAKE SNO	10920	4/01	1	25.05	20.3	17.5
BIRCH CROSSING	8100	3/27	10	2.8	1.7	6.0	FRANCES FLATS	6700				22.4	14.5
BLACK FLAT-U.M. CK S	9400	4/01	ı	9.98	9.4	10.3	G.B.R.C. HEADQUARTER	8700	3/26	43	17.3	14.8	17.2
BLACK'S FORK GS-EF	9340	3/29	28	6.8	12.9	9.6	G.B.R.C. MEADOWS	10000	3/26	68	27.4	26.4	24.2
BLACK'S FORK JUNCIN	8930	3/29	28	9.3	12.6	9.4	GARDEN CITY SUMMIT	7600	3/28	20	21.7	17.2	17.6
BOX CREEK SNOTEL	9800	4/01	1	12.28	14.1	13.8	GEORGE CREEK	8840	3/28	75	30.4	24.0	23.1
BRIAN HEAD	10000	3/26	51	19.5	14.0	21.2	GOOSEBERRY R.S.	8400	3/26	28	10.7	9.5	12.5
BRIGHTON CABIN	8700	4/01	98	35.2	34.7	27.3	GOOSEBERRY R.S. SNOT	7900	4/01	,	3.28	5.4	11.7
BRIGHTON SNOTEL	8750	4/01	t	26.78	28.2	23.1	HARDSCRABBLE SNOTEL	7250	4/01	1	21.78	22.0	18.2
BROWN DUCK SNOTEL	10600	4/01	ı	23.18	20.3	18.9	HARRIS FLAT SNOTEL	7700	4/01		1.48	0.0	6.5
BRYCE CANYON	8000	3/31	0	0.0	0.0	3.6	HAYDEN FORK SNOTEL	9100	4/01	1	18.45	23.0	16.5
BUCK FLAT SNOTEL	9800	4/01	ı	27.78	25.4	18.1	HENRY'S FORK	10000	3/29	37	11.9	16.8	14.0
BUCK PASTURE	9700	3/29	48	15.4	22.6	16.1	HEWINTA SNOTEL	9500	4/01	,	11.08	17.7	11.5
BUCKBOARD FLAT	0006	4/01	43	13.1	8.8	12.6	HICKERSON PARK SNOTE	0016	4/01		8.55	5.9	6.9
BUG LAKE SNOTEL	7950	4/01	ı	33.48	25.1	21.3	HIDDEN SPRINGS	5500	4/03	0	0.0	1.9	3.6
BURT'S-MILLER RANCH	7900	3/29	8	2.9	6.4	5.7	HOBBLE CREEK SUMMIT	7420	3/27	44	17.9	18.0	14.3
CAMP JACKSON SNOTEL	8600	4/01	ı	18.75	1.8	9.6	HOLE-IN-ROCK SNOTEL	9150	4/01	1	6.25	8.4	6.5
CASTLE VALLEY SNOTL	9580	4/01	ı	10.75	12.1	14.4	HORSE RIDGE SNOTEL	8260	4/01	t	38.15	28.8	23.3
CHALK CK #1 SNOTEL	9100	4/01	1	32.38	29.6	23.9	HUNTINGTON-HORSESHOE	9800	3/26	71	8.62	23.2	24.2
CHALK CK #2 SNOTEL	8200	4/01		22.58	17.6	15.8	INDIAN CANYON SNOTEL	9100	4/01	1	14.8S	12.0	11.8
CHALK CREEK #3	7500	3/29	18	6.7	9.1	7.5	JOHNSON VALLEY	8850	3/26	16	6.4	7.6	7.1
OTEL	10300	4/01		14.58	12.6	14.3	KILFOIL CREEK	7300	3/28	57	21.6	17.6	14.2
CITY CREEK	7500	4/03	72	31.0	32.6	27.3	KILLYON CANYON	6300	3/31	7	0.5	8.8	•
CLEAR CK RIDG #1 SNT	9200	4/01	r	28.68	24.3	19.8	KIMBERLY MINE SNOTEL	9300	4/01	,	14.18	14.9	16.2
CLEAR CK RIDG #2 SNT	8000	4/01	1	18.68	16.0	14.7	KING'S CABIN SNOTEL	8730	4/01	,	13.48	8.5	11.8
CLEAR CREEK RIDGE #3	0099				ı	5.5	KLONDIKE NARROWS	7400	3/28	57	25.0	22.4	19.9
COLD WATER SPRINGS	6030				·	•	KOLOB SNOTEL	9250	4/01	ı	17.38	18.0	23.6
CORRAL	8200	3/26	27	10.7	5.3	9.4	LAKEFORK #1 SNOTEL 1	10100	4/01	ı	16.58	15.2	12.1
CURRANT CREEK SNOTEL	8000	4/01	ı	13.68	12.7	11.0	LAKEFORK BASIN SNOTE 1	10900	4/01	,	27.85	26.9	23.4
DANIELS-STRAWBERRY S	8000	4/01	ı	23.98	23.9	18.3	LAKEFORK MOUNTAIN #3	8400	3/29	23	0.6	7.4	6.1
DESERET PEAK	9250	3/26	54	20.3	19.7	19.2	LAMBS CANYON	7400	4/02	49	18.4	18.9	17.0
DESERET PEAK AM	9250	3/26	43	16.4	15.4	16.7	LASAL MOUNTAIN LOWER	8800	3/27	18	7.2	10.0	7.6
DESERET PEAK SNOTEL	9250	4/01	ı	23.6S	19.4	21.7	LASAL MOUNTAIN SNOTE	9850	4/01	ı	10.18	12.3	13.8
DILL'S CAMP SNOTEL	9200	4/01		17.98	16.5	15.1	LILY LAKE SNOTEL	9050	4/01	,	17.05	18.4	13.4
DONKEY RESERVOIR SNO	9800	4/01	1	10.48	7.4	4.	LITTLE BEAR LOWER	0009	3/28	34	13.9	9.4	7.6

SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	MONS	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
LITTLE BEAR SNOTEL	6550	4/01	1	17.28	8.7	12.4	THISTLE FLAT	8500	3/26	46	18.2	17.2	17.3
LITTLE GRASSY SNOTEL	6100	4/01	1	S0.0	0.0	<b>-</b>	TIMBERLINE	9100	3/26	51	17.2	10.6	14.8
LONG FLAT SNOTEL	8000	4/01	ı	0.08	0.0	5.5	TIMPANOGOS DIVIDE SN	8140	4/01	1	36.25	22.1	25.5
LONG VALLEY JCT. SNT	7500	4/01	1	0.08	0.0	۲.	TONY GROVE LK SNOTEL	8400	4/01	1	53.98	42.2	36.9
LOOKOUT PEAK SNOTEL	8200	4/01	ı	37.45	32.6	26.5	TONY GROVE R.S.	6250	3/28	39	15.2	13.1	11.5
LOST CREEK RESERVOIR	6130	3/27	18	6.5	5.5	1.9	TRIAL LAKE	0966	3/29	81	35.4	29.3	24.2
MAMMOTH-COTTONWD SNT	8800	4/01	,	30.18	23.8	21.0	TRIAL LAKE SNOTEL	0966	4/01		34.25	31.7	25.0
MERCHANT VALLEY SNOT	8750	4/01	1	18.75	13.4	12.4	TROUT CREEK SNOTEL	9400	4/01	,	10.25	7.8	11.8
MIDDLE CANYON	7000	3/27	29	11.7	12.4	14.4	UPPER JOES VALLEY	8900	3/26	30	12.0	13.1	10.4
MIDWAY VALLEY SNOTEL	9800	4/01	ſ	20.75	17.2	24.6	VERNON CREEK SNOTEL	7500	4/01	ı	14.75	7.3	12.1
MILL CREEK	6950	4/02	89	24.1	21.8	20.9	VI PONT	7670	3/28	57	23.0	17.6	15.8
MILL-D NORTH SNOTEL	8960	4/01		34.58	28.8	24.1	WEBSTER FLAT SNOTEL	9200	4/01		4.58	8.2	16.5
MILL-D SOUTH FORK	7400	4/02	55	21.4	24.6	19.6	WHITE RIVER #1 SNOTE	8550	4/01	•	20.3S	17.8	13.9
MINING FORK SNOTEL	8000	4/01		25.95	22.6	16.4	WHITE RIVER #3	7400	3/27	16	6.4	11.9	7.0
MONTE CRISTO SNOTEL	0968	4/01	ı	40.85	37.1	29.9	WIDTSOE #3 SNOTEL	9500	4/01	•	12.98	6.3	12.1
MOSBY MTN. SNOTEL	9500	4/01	ı	18.18	8.2	11.3	WRIGLEY CREEK	0006	3/26	36	13.4	11.9	11.4
MT.BALDY R.S.	9500	3/26	71	29.0	25.1	24.3	YANKEE RESERVOIR	8700	3/26	59	10.3	7.8	10.0
MUD CREEK #2	8600	3/26	51	20.1	18.7	13.7	NOTE:						-
OAK CREEK	7760	3/26	31	10.4	9.6	12.9	The S flag following Water Content for SNOTEL	ter Co	ntent for		sites indi	cates t	sites indicates telemetered
PANQUITCH LAKE	8200	3/26	-	4.	1	4.0	data. The Depth reading preceeding	g prec	eeding S 1	S flagged	data was m	easured	data was measured around the
PARLEY'S CANYON SNOT	7500	4/01	ı	16.38	19.6	19.1	snow pillows at the time	e of tl	of the ground survey		and may not be the	t be th	e same date as
PARLEY'S CANYON SUM.	7500	4/02	62	20.9	23.7	18.8	the telemetered value.						
PAYSON R.S. SNOTEL	8050	4/01	ı	15.45	19.3	22.6							
PICKLE KEG SNOTEL	9600	4/01	ı	16.08	17.4	18.8							
PINE CREEK SNOTEL	8800	4/01	•	23.65	23.9	21.4							
RED PINE RIDGE SNOTE	9200	4/01	,	16.78	18.9	18.0							
REDDEN MINE LOWER	8500	3/27	50	20.3	20.5	18.2							
REES'S FLAT	7300	3/26	36	12.4	10.6	13.3							
ROCK CREEK SNOTEL	7900	4/01		14.78	10.8	8.6							
ROCKY BN-SETTLEMT SN	8900	4/01	,	28.95	19.9	26.0							
SEELEY CREEK SNOTEL 1	10001	4/01	,	16.98	13.2	15.3							
SILVER LAKE (BRIGHT.)	8730	4/01	79	34.6	29.6	25.8							
SMITH MOREHOUSE SNTL	7600	4/01	1	15.68	20.4	14.6							
SNOWBIRD SNOTEL	9700	4/01		52.68	44.5	33.5							
SPIRIT LAKE	10300	3/29	44	14.2	11.3	13.5							
SQUAW SPRINGS	9300	3/26	17	6.2	6.9	7.2							
STEEL CREEK PARK SNO 1	10100	4/01	,	16.28	19.7	16.6							
STILLWATER CAMP	8550	3/29	31	11.9	14.4	10.8							
STRAMBERRY DIVIDE SN	8400	4/01		27.38	22.4	19.8							
STUART R.S.	7950				ı	7.6							
SUSC RANCH	8200	3/27	0	0.0	0.0	7.0							
TALL POLES	8800	3/27	38	14.6	10.6	14.7							
THAYNES CANYON SNOTL	9200	4/01	t	30.08	29.7	22.1							

### UTAH SURFACE WATER SUPPLY INDEX

NRCS SNOW SURVEYS - As of Apr 1, 1997

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero indicating a median water supply as compared to historical analysis.

SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage alone. The SWSI index allows comparison of water availability between basins/regions for drought or flood severity analysis.

Basin or Region	SWSI/% Value	Most Recent Year With Similar SWSI Value	Agricultural Water Shortage May Occur if SWSI less than
Bear River	0.0 / 50%	70,68,73,82	-3.8
Ogden River	2.9 / 85%	82,69,80,83	
Weber River	2.5 / 80%	74,80,85,75	
Tooele Valley	NA		
Provo	NA		
North Slope	NA		
West Uintah Basin	3.6 / 93%	86,87,95	
East Uintah Basin	2.4 / 79%	84,87,86,95	
Price River	2.7 / 83%		
San Rafael	3.2 / 88%	80,86,84,83	
Moab	0.0 / 50%	94,92,86,85	
Upper Sevier River	1.5 / 68%		
Lower Sevier River	1.6 / 70%		
Beaver River	2.3 / 78%	82,84,73,86	
Virgin River	1.2 / 64%	86,94,92,88	

### 

The percent chance of non-exceedance is a probability that can be best thought of as a simple scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and 50 representing average conditions. Each SWSI unit represents about 12% of historical occurences scaled between -4 and + 4, comparable to the Palmer Drought Index. Normal water supply conditions comprise the middle third (33%) of the scale with dry and wet categories occupying a third (33%) at each end of the spectrum.

Many agencies contribute data to calculate SWSI values: National Weather Service, Bureau of Reclamation, Utah State Water Resources and many private Corporations and Individuals.

1 S	• •
	•

Issued by

Paul W. Johnson Chief Natural Resources Conservation Service U.S. Department of Agriculture Released by

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### Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT





Natural Resources Conservation Service

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### Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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### STATE OF UTAH GENERAL OUTLOOK May 1, 1997

### **SUMMARY**

Climatic conditions during April were such that high elevation snowpacks in northern Utah increased, mid elevations maintained the status quo and low elevations produced some good melt. Some high elevation areas in the north increased snowpacks and others had only 50% of normal melt or less. Southern Utah, in general produced only 30% to 45% of average snowmelt during the past month. Overall snowmelt during April was only 30% to 50% of normal statewide. March mitigated, to some extent, the potential for high streamflow in northern Utah and April has brought it back to some extent. There is, however, less snow at the lower elevations than in the flood years of 83 and 84, a substantial mitigating factor. Cool temperatures have delayed substantial snowmelt at many sites while storms have augmented some snowpacks and at times have brought snow to the valleys. Snowmelt that has been delayed won't be much longer as the days lengthen and average temperatures rise substantially, snowpacks will quickly begin to melt. Snowpacks in northern Utah are near 175% of normal and in the south they range from 90% to 180% of average. Precipitation during April was very near average in northern Utah (95%-120%) whereas in the south precipitation ranged from 120% to 170% of average. Water supply conditions are excellent and almost all areas of the state will see above average streamflow this year. The exception is the Virgin River which has below normal snowpacks. Most streams should have high flows that last well into the summer months. Reservoirs should easily fill in most areas. Given the extraordinary snowpacks on the Bear and Weber Rivers, there continues to be some potential for agricultural inundation this spring. Those areas prone to agricultural flooding are likely to experience it again this season. Climatic conditions during May will determine the potential and extent of any inundation.

### **SNOWPACK**

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 159% of normal, up 35% relative to last month and about 1.3 times those of last year. Snowpacks in the north are much above average ranging from 150% to 180% of normal. In the south, snowpacks range from 90% to 130% of average. In southeastern Utah, an area hard hit by drought last year, snowpacks range from 150% to 200 % of average.

### **PRECIPITATION**

Mountain precipitation in April, as measured by the NRCS SNOTEL system, was above normal at 120% of average statewide. This brings the seasonal accumulation (Oct-Apr) to 125% of average. Precipitation was near normal in the north (95%-108%) and much above normal in the Uintah Basin and southern Utah at 120%-170%.

National Weather Service precipitation figures show normal to above normal precipitation statewide. Some areas recieved 3 to 4 times the average such as: Capitol Reef - 404%, Green River - 376%, Roosevelt - 397% and Randolph - 354%. In the extreme southwest, precipitation was below normal: Zion NP - 58% and St George - 67% of average.

### RESERVOIRS

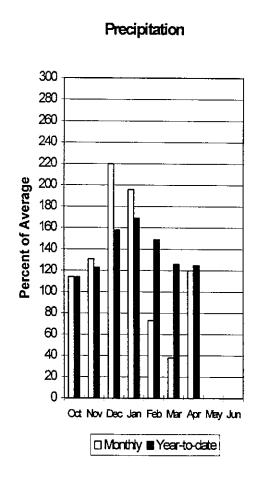
Storage in 41 of Utah's key irrigation reservoirs is at 79% of capacity. Some reservoirs are releasing water in expectation of high flows, while others are full and spilling.

### STREAMFLOW

Expected streamflow from snowmelt runoff range from below and near average to near record levels throughout Utah. In the north, much above average to near record conditions prevail whereas in the south, below and near normal streamflow is expected. Streamflows in northern Utah could have much higher peak flows and longer duration than normal. There is potential for some agricultural inundation in northern Utah.

# 35 30 30 25 20 15 15 0 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun Current - Average Maximum Minimum

Mountain Snowpack



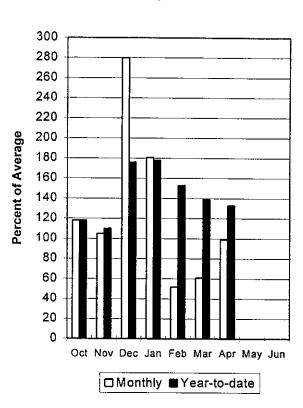
### Bear River Basin May 1, 1997

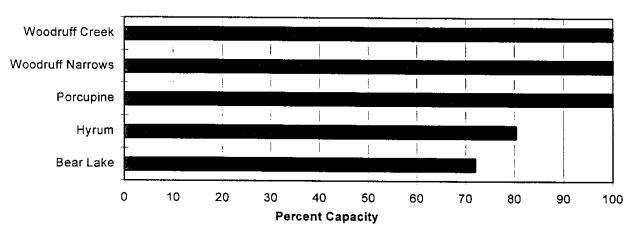
Snowpack on the Bear River Basin is much above average at 175% of normal, ranging from 95% to 215% at specific sites. Snowpacks on the Bear River are near record levels in the upper basin, especially in the Logan Canyon area. April brought an increase in snowpacks in some areas and the general snowmelt was only 46% of normal. April precipitation was near normal at 106%, which brings the seasonal accumulation (Oct-Apr) to 134% of average. Water supply conditions are excellent and much above average runoff is expected with a high potential for agricultural inundation. Reservoir storage is at 73% capacity.

### **Mountain Snowpack**

### 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-May Current Average Maximum Minimum :

### Precipitation





### BEAR RIVER BASIN Streamflow Forecasts - May 1, 1997

	========	:========	=========	========	=========	=======================================	========	=========
		<<======	Drier ====	== Future C	onditions ==	===== Wetter	====>>	
Forecast Point	_	!					ĺ	
rolecast Point	Forecast	_=======	=========	= Chance Of	Exceeding * =	=========	=======	
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
=======================================		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
BEAR R nr UT-WY State Line	APR-JUL	127	143	========   155	========   135	168	189	*************
BEAR R nr Woodruff (2)	APR-JUL	111	167	205	138	243		115
BIG CK nr Randolph	APR-JUL	2.46	4,57	6.00	158		299	149
	7.1. N. DOL	E. 70	7.31	1 5.00	1 001	7.43	9.54	3.80
BEAR R nr Randolph, UT	APR-JUL	115	145	1 165	140 l	185	215	118
SMITHS FORK or Border, WY	APR-JUL	133	143	150	147	157	167	102
THOMAS FK nr WY-ID State Line	APR-JUL	31	39	46	139	54	68	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	331	378	   410	142	442	489	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	12.0	14.8	17.0	139	19.6	24	12.2
CUB R nr Preston	APR-JUL	59	64	67	143	70	75	47
				, <del>-</del> ,	1.75	, 5	1.3	47
LOGAN R nr Logan	APR-JUL	172	185	195	182	205	221	107
BLACKSMITH Fk nr Hyrum	APR-JUL	75	84	90	167 j	97	108	54
	========	========	=========			=========	========	=======================================

Reservoir Sto	BEAR RIVER BASIN rage (1000 AF) - End	of April		 	BEAR RIVER BASIN Watershed Snowpack Analysis - May 1, 1997
Reservoir	Usable   Capacity  		ble Stor Last Year	age ***       Avg	Number This Year as % of ### Number   Number This Year as % of ##################################
	================	=======	=======	======	=======================================
BEAR LAKE	1421.0	1023.0	722.0	1059.0	BEAR RIVER, UPPER (abv Ha 6 106 168
HYRUM	15.3	12.3	15.3	13.2	BEAR RIVER, LOWER (blw Ha 7 146 185
PORCUPINE	11.3	11.3	11.3	9.5	LOGAN RIVER 4 145 212
WOODRUFF NARROWS	57.3	57.3	57.3		RAFT RIVER 0 0 0
WOODRUFF CREEK	4.0	4.0	4.0		BEAR RIVER BASIN 13 126 177
		========		========	

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

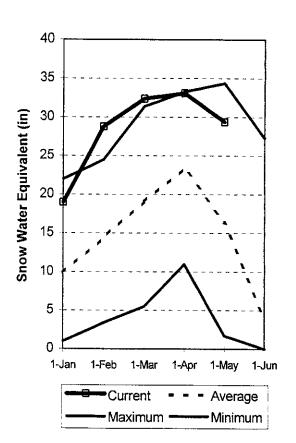
<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

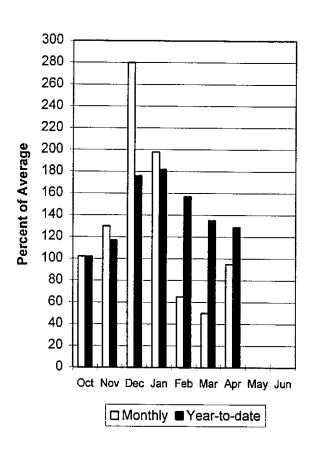
### Weber and Ogden River Basins May 1, 1997

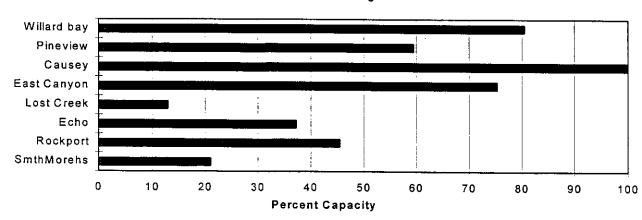
Snowpack on the Weber and Ogden Watersheds is at 180% of average. Individual sites range from 110% to 255 % of average. The April snowpack decrease was only 53% of normal. Precipitation during April was near normal at 95% of average, bringing the seasonal accumulation (Oct-Apr) to 129% of average. Reservoir storage on the Weber system is at 63% of capacity. General water supply conditions are excellent. Streamflows could have much higher peaks and longer duration than normal, with a high potential for agricultural inundation.

### Mountain Snowpack



### Precipitation





### WEBER & OGDEN WATERSHEDS in Utah Streamflow Forecasts - May 1, 1997

		<<=====	Drier ====	== Future Co	onditions ==	==== Wetter	====>>	
Forecast Point	Forecast	=======	=======================================	= Chance Of E	Exceeding * =	============	=======	
	Period	90%	70%		Probable)	30%	10% i	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	== <b>==</b> ================================	43	==========   45	150		======== 51	<b>3</b> 0
WEBER R nr Oakley	APR-JUL	149	159	165	135	171	181	122
ROCKPORT RESEROIR inflow	APR-JUL	172	183	190	142	197	208	134
CHALK CK at Coalville, Ut	APR-JUL	55	63	[ 68	155	73	81	44
ÆBER R nr Coalville, Ut	APR-JUL	173	186	195	143	204	217	136
ECHO RESEROIR Inflow	APR-JUL	219	243	260	148	277	301	176
OST CK Res Inflow	APR-JUL	19.0	23	26	151	29	33	17.2
CANYON CK nr Morgan	APR-JUL	33	38	42	140	46	51	30
EBER R at Gateway	APR-JUL	426	467	495	143	523	564	347
FORK OGDEN R nr Huntsville	APR-JUL	86	93	97	154	101	108	63
INEVIEW RESEROIR Inflow	APR-JUL	159	177	190	153	203	221	124
HEELER CK nr Huntsville	APR-JUL	8.39	9.35	10.00	161	10.65	11.61	6,20

Reservoir S	Storage (1000 AF) - End	of April		j	Watershed Snowpack	Analysis -	May 1, 19	97
Reservoir	Usable   Capacity	*** Usa This Year	able Stora Last Year	ge ***     Avg	Watershed	Number of Data Sites	This Yea	r as % of
CAUSEY EAST CANYON ECHO LOST CREEK PINEVIEW ROCKPORT	7.1 49.5 73.9 22.5 110.1	7.1 37.3 27.5 2.9 65.5	2.9 36.9 40.4 17.1 62.7	2.6   41.5   54.2   14.3   76.6	OGDEN RIVER WEBER RIVER WEBER & OGDEN WATERSHED	4 8 S 12	152 108 123	177 188 183
WILLARD BAY	60.9 215.0	27.7 173.1	32.4 178.6	36.8   139.7				

WEBER & OGDEN WATERSHEDS in Utah

The average is computed for the 1961-1990 base period.

WEBER & OGDEN WATERSHEDS in Utah

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

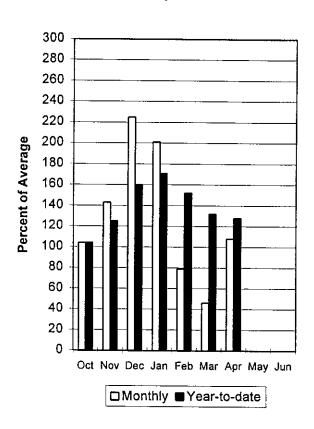
### Utah Lake, Jordan River & Tooele Valley Basins May 1, 1997

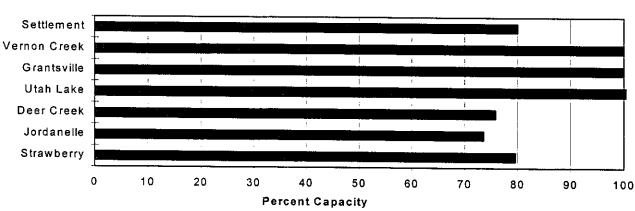
Snowpacks over these watersheds are above average at 174% of normal, up 47% relative to last month due to the below normal snowmelt and snowpack increases at higher elevations. Individual sites range from 78% to 370% of average. April snowmelt was only 35% of average. Precipitation during April was near normal at 108%, bringing the seasonal accumulation (Oct-Apr) to 128% of average. Reservoir storage is at 89% of capacity. Water supply conditions are above average and above average peak flows, with longer flow durations, can be expected. There is some potential for agricultural inundation.

### **Mountain Snowpack**

### 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 1-Feb 1-Mar 1-May 1-Jun Current Average Maximum Minimum

### Precipitation





### TAN LAW MORN DAYS A TOUR DAYS AND THE RESERVE OF TH

### UTAH LAKE, JORDAN RIVER & TOOELE VALLEY Streamflow Forecasts - May 1, 1997

		<<======	Orier ====	== Future Co	nditions ==:	===== Wetter	. ====>>	
Forecast Point	Forecast	{   =======		= Chance Of E	xceeding * =:		   =======	
	Period	90%	70%	50% (Most		30%	10%	30-Yr Avg
		(1000AF)	•	•	(% AVG.)		(1000AF)	(1000AF)
PAYSON CK nr Payson	APR-JUL	1.23	3.02	===========   4.20	====== : 96	========= 5.38	7.35	4.40
SPANISH FORK or Castilla	APR-JUL	48	81	100	135	119	152	7.40
HOBBLE CK nr Springville	APR-JUL	19.9	24	25	133	26	30	18.8
PROVO R nr Hailstone	APR-JUL	122		   152	139		182	109
ROVO R below Deer Creek Dam	APR-JUL	131		175	137		220	128
AMERICAN FORK nr American Fk.	APR-JUL	43	47	49	153	51	55	32
TAH LAKE inflow	APR-JUL	314		   460	142		606	324
COTTONWOOD CRK nr SLC	APR-JUL	39	44	46	118	49	53	39
SIG COTTONWOOD CRK nr SLC	APR-JUL	39	43	46	121	49	53	38
ARLEY'S CK nr SLC	APR-JUL	11.0	15.3	18.0	113 }	21	25	15.9
ILL CK nr SLC	APR-JUL	5.20	6.70	7.70	119	8.70	10.47	6.50
ELL FK nr SLC	APR-JUL	4.69	6.95	8.20	116	9.45	12.00	7.10
MIGRATION CK nr SLC	APR-JUL	1.39	3.15	4.20	100	5.25	7.01	4.20
ITY CK nr SLC	APR-JUL	6.39	8.45	9.70	117	10.95	13.03	8.30
ERNON CK nr Vernon (in Acre Feet)	APR-JUL	1321	1790	2200	164	2703	3664	1340
ETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	2773	3129	3400	148	3694	4169	2300
WILLOW CK nr Grantsville	APR-JUL	2.59	3.67	4.40	142	5.13	6.21	3.10
UTAH LAKE, JORDAN R			=======================================	:=======::: 	 UTAH LAKE, J		2 TOOLIE VAL	:= <b>:::::::</b> ::::::::::::::::::::::::::::
Reservoir Storage (1000					latershed Sno			

	Usable	*** Usa	ble Stora	ge ***		Number	This Yea	 r as % of
Reservoir	Capacity	This	Last	İ	Watershed	of	=======	
	I	Year	Year	Avg	D	ata Sites	Last Yr	Average
		=======		====== =	=======================================	========	=======	=======
DEER CREEK	149.7	113.6	118.1	106.9	PROVO RIVER & UTAH LAKE	7	107	153
GRANTSVILLE	3.3	3.3	3.0	j	PROVO RIVER	4	109	157
SETTLEMENT CREEK	1.0	0.8	0.9	0.7	JORDAN RIVER & GREAT SAL	•	111	214
STRAWBERRY-ENLARGED	1105.9	880.3	719.1	i	TOOELE VALLEY WATERSHEDS		151	150
UTAH LAKE	870.9	960.5	922.0	766.8	UTAH LAKE, JORDAN RIVER	-	116	174
VERNON CREEK	0.6	0.6	0.6	0.6			.,.	117

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

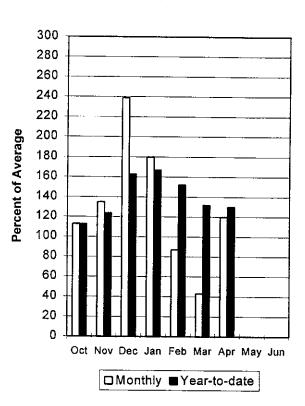
### Uintah Basin and Dagget SCD's May 1, 1997

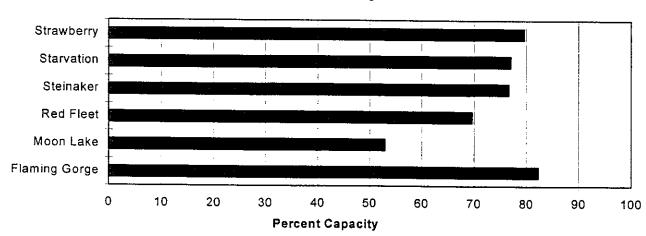
Snowpacks across the Uintah Basin and North Slope areas are much above average. The North Slope is at 166% and the Uintah Basin is near 146% of average. Snowpacks in these areas had only 43% of normal snowmelt last month. Precipitation during April was above average at 120% of normal, bringing the seasonal accumulation (Oct-Apr) to 130% of average. Reservoir storage is at 77% of capacity. Water supply conditions are excellent with much above average streamflow expected, high peak flows and a high potential for agricultural inundation.

### Mountain Snowpack

### 40 35 (ii) 30 25 20 15 10 10 10 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun Current - Average Maximum Minimum

### Precipitation





### 

### UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - May 1, 1997

				== Future Co				*=======
Forecast Point	Forecast Period	   =======   90%   (1000AF)	70% (1000AF)	= Chance Of E   50% (Most   (1000AF)		30% (1000AF)	      10%     (1000AF)	30-Yr Avg. (1000AF)
WEEKS SADAM DESCRIPTION OF THE SAME SAME SAME SAME SAME SAME SAME SAM	========			=======================================		•		
MEEKS CABIN RESERVOIR Inflow	APR-JUL	92	100	105	109	110	118	96
STATE LINE RESERVOIR INFLOW	APR-JUL	25	29	32	107	35	39	30
HENRYS FORK or Manila	APR-JUL	17.8	31	40	95	49	62	42
FLAMING GORGE RES INFLOW	APR-JUL	1495	1714	1800	151	1886	2105	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	17.4	21	24	121	27	31	19.8
ASHLEY CK nr Vernal	APR-JUL	51	59	65	128	71	79	51
				İ	j			
¥F DUCHESNE RIVER or Hanna	APR-JUL	26	32	36	139	41	48	26
DUCHESNE R nr Tabiona	APR-JUL	125	134	140	133	146	155	105
ROCK CK nr Mountain Home	APR-JUL	98	108	115	122	122	132	94
UPPER STILLWATER RESV inflow	APR-JUL	84	95	i I 102	126	110	120	81
DUCHESNE R abv Knight Diversion	APR-JUL	202	228	245	130	262	288	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	73	86	95	161	105	120	59
CURRANT CREEK RESV Inflow	APR-JUL	28	31	   33	157	35	39	21
STARVATION RESERVOIR inflow	APR-JUL	165	183	, l 195	167	207	225	117
MOON LAKE Inflow	APR-JUL	72	80	86	125	92	100	69
YELLOWSTONE R nr Altonah	APR-JUL	65	74	   81	125	88	97	65
DUCHESNE R at Myton	APR-JUL	326	382	420	160	458	514	263
WHITEROCKS R nr Whiterocks	APR-JUL	54	63	70	121	77	86	58
UINTA R nr Neola	APR-JUL	78	92	   102	120	112	126	85
DUCHESNE R nr Randlett	APR-JUL	364	439	530	162	621	695	328

UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of April

UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - May 1, 1997

Reservoir	Usable   Capacity	*** Usa This	able Stora Last	ge ***	Watershed	Number of		r as % of
=======================================	<u>-</u>	Year	Year	Avg	D	ata Sites	Last Yr	Average
FLAMING GORGE	3749.0	3087.0	3107.3	: ======   	UPPER GREEN RIVER in UTA	======== H 6		 166
MOON LAKE	49.5	26.2	29.1	31.8	ASHLEY CREEK	2	436	185
RED FLEET	25.7	17.9	22.1		BLACK'S FORK RIVER	2	82	120
STEINAKER	33.4	25.6	30.9	23.0	SHEEP CREEK	1	0	324
STARVATION	165.3	129.3	144.8	113.5	DUCHESNE RIVER	11	126	146
STRAWBERRY-ENLARGED	1105.9	880.3	719.1		LAKE FORK-YELLOWSTONE CRI	E 4	111	127
				j	STRAWBERRY RIVER	4	122	183
				į	UINTAH-WHITEROCKS RIVERS	2	207	148
				1	UINTAH BASIN & DAGGET SCI	D 17	134	151

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

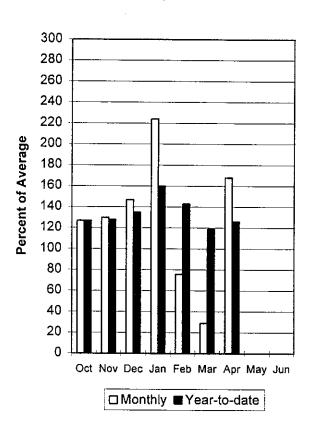
### Carbon, Emery, Wayne, Grand and San Juan Co. May 1, 1997

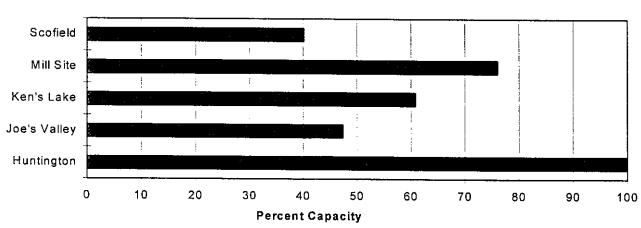
Snowpacks in this region are at 151% of average, up 26% relative to last month. Last year in southeastern Utah, most snowpacks had already melted by this time. Individual sites range from 30% to 630% of normal. April snowmelt was only 41% of normal. Precipitation during April was much above average at 168%, bringing the seasonal accumulation (Oct-Apr) to 126% of normal. Reservoir storage is at 49% of capacity. General water supply conditions are above average throughout the region and above average flows are expected. There is some potential of agricultural inundation.

### **Mountain Snowpack**

### 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 1-Feb 1-Mar 1-May 1-Jun Current Average Maximum Minimum

### Precipitation





### CARRON FREDVILLEN D. A.M. W.M. C.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Streamflow Forecasts - May 1, 1997

		<<======	Drier ====	== Future C	onditions ==:	==== Wetter	====>>	
Forecast Point	Forecast	=======		= Chance Of (	Exceeding * ==		 	
	Period	90%	70%	:	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	•	(% AVG.)   =======		(1000AF)	(1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	13.3	15.9	   17.0	145	18.1	21	11,7
SCOFIELD RESV Inflow	APR-JUL	33		60	136	720	87	44
WHITE R blw Tabbyune Ck	APR-JUL	17.1	21	23	123	25	29	18.7
GREEN R at Green River, UT	APR-JUL	3876	4457	!   4700	149	4943	5514	3151
ELECTRIC LAKE inflow	APR-JUL	19.9	21	. 22	146	23	24	15.1
HUNTINGTON CK nr Huntington	APR-JUL	32		55	134		78	41
JOE'S VALLEY RESV Inflow	APR-JUL	53	63	   70	132	77	87	53
FERRON CK nr Ferron	APR-JUL	. 43	48	52	133	56	61	39
COLORADO R nr Cisco	APR-JUL	55 <b>81</b>	6039	6350	154	6661	7119	4132
MILL CK at Sheley Tunnel	APR-JUL	2.73	3.58	4.30	72	5.17	6.78	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	4.52	6.59	8.00	123	9.41	11.48	6.50
MUDDY CK nr Emery	APR-JUL	21		26	133		31	19.6
LOYD'S RESERVOIR inflow	MAR-JUL	1.62	2.67	4.10	141	5.53	7.64	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	4.32	6.37	8.00	200	9.81	12.81	4.00
SAN JUAN R nr Bluff	APR-JUL	1359	1548	1670	145	1792	1981	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Reservoir Storage (1000 AF) - End of April

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co. Watershed Snowpack Analysis - May 1, 1997

Reservoir	Usable   Capacity  	*** Usabl This Year	e Storage Last Year	***       Avg	Watershed D	Number of ata Sites	This Year	r as % of
HUNTINGTON NORTH	4.2	4.2	4.1	3.9	PRICE RIVER	3	128	208
JOE'S VALLEY	61.6	29.2	45.0	46.8	SAN RAFAEL RIVER	3	131	153
KEN'S LAKE	2.3	1.4	1.8	j	MUDDY CREEK	1	121	156
MILL SITE	16.7	12.7	13.0	6.3	FREMONT RIVER	3	449	177
SCOFIELD	65.8	26.4	22.6	36.6	LASAL MOUNTAINS	1	191	85
				i	BLUE MOUNTAINS	1	0	630
				I	WILLOW CREEK	1	0	0
				ĺ	CARBON, EMERY, WAYNE, GR	A 13	162	181
		=======	=======	======		========		

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

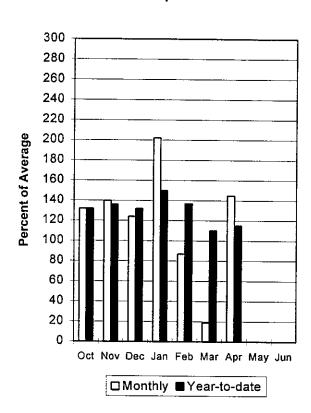
### Sevier and Beaver River Basins May 1, 1997

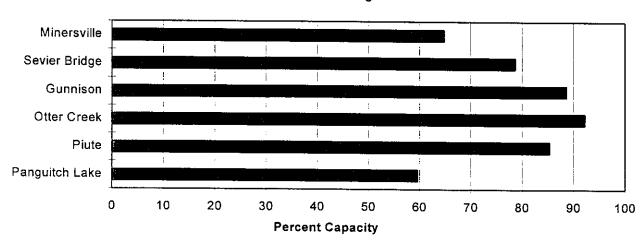
Snowpacks on the Sevier River Basin are at 126% of average, up 31% relative to last month. The Beaver River Basin is higher at 146% of normal. Individual sites range from 0% to 235% of average. April snowmelt was just 28% of normal. Precipitation during April was much above average at 145% or normal, bringing the seasonal accumulation (Oct-Apr) to 115% of average. Reservoir storage is at 81% of capacity. General water supply conditions are near average and streamflows should be adequate.

### Mountain Snowpack

### 40 35 Snow Water Equivalent (in) 30 25 20 15 10 5 0 1-Feb 1-Mar 1-May Current Average Maximum Minimum

### Precipitation





### SEVIER & BEAVER RIVER BASINS Streamflow Forecasts - May 1, 1997

=======================================	=======================================	=========	=========	========	· ============	=======		·
		<<======	Drier ====	== Future C	onditions ===	==== Wetter	. ====>>	
Forecast Point	Forecast	=======	=========	= Chance Of	Exceeding * ==	=======================================	=======	
	Period	90%	70%		Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SEVIER R at Hatch	APR-JUL	33	.========	1	=======[:		=======================================	
SEVIER R nr Circleville	APR-JUL	33 41	43	49	91	<b>55</b>	65	54
SEVIER R nr Kingston	_		56	65	87	74	89	75
SEVIER R III RINGSCON	APR-JUL	44	61	71	86	81	98	83
ANTIMONY CK nr Antimony	APR-JUL	6.42	7.56	8.20	112	8.84	10.00	7.30
E F SEVIER R nr KINGSTON	APR-JUL	15.0	28	35	117	42	55	30
SEVIER R blw Piute Dam	APR-JUL	52	90	107	93	124	162	115
CLEAR CK nr Sevier	APR-JUL	14.1	18.5	   21	100 I	24	28	21
SALINA CK at Salina	APR-JUL	6.8	10.6	17.0	97	23	36	17.6
PLEASANT CK nr Pleasant	APR-JUL	8.67	9.61	10.10	119	10.59	11.73	8.50
EPHRAIM CK or Ephraim	APR-JUL	9.6	11.9	   13.2	105 I	14.5	16.8	12.6
SEVIER R nr Gunnison	APR-JUL	19.0	140	225	94	310	430	239
CHICKEN CK nr Levan	APR-JUL	4.12	4.94	5.50	117	6.06	6.88	4.70
OAK CK nr Oak City	APR-JUL	0.91	1.62	   2.10	124	2.58	3.29	1 70
BEAVER R nr Beaver	APR-JUL	20	27	32	124   123	2.56 37		1.70
MINERSVILLE RESEROIR inflow	APR-JUL	11.5	16.5	1 32 I 20	120 I		44	26
======================================	AFR OUL	11.2	C.01	] 20	120	24	29	16.7

SEVIER	₹ &	BEAVER	S RI	/ER	BAS	INS	ŝ
Reservoir Stora	ge	(1000	AF)	- 1	End	of	April

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - May 1, 1997

	Usable		ble Stora	ge ***		Number	This Yea	r as % of
Reservoir	Capacity	This	Last		Watershed	of	======	=======
		Year	Year	Avg	Da	ta Sites	Last Yr	Average
***************************************	=======================================		=======	====== :		=======	=======	
GUNNISON	20.3	18.0	17.5	14.9	UPPER SEVIER RIVER (south	7	216	105
MINERSVILLE (Rkyfd)	23.3	15.1	23.3	14.6	EAST FORK SEVIER RIVER	2	319	137
OTTER CREEK	52.5	48.4	52.7	39.5	SOUTH FORK SEVIER RIVER	5	179	92
PIUTE	71.8	61.3	56.4	44.7	LOWER SEVIER RIVER (inclu	6	135	136
SEVIER BRIDGE	236.0	185.7	215.1	136.0	BEAVER RIVER	2	172	146
PANGUITCH LAKE	22.3	13.3	19.8		SEVIER & BEAVER RIVER BAS	15	161	126
***********************			=======	=======	*============		=======	========

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

<sup>(1) -</sup> The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

<sup>(2) -</sup> The value is natural flow - actual flow may be affected by upstream water management.

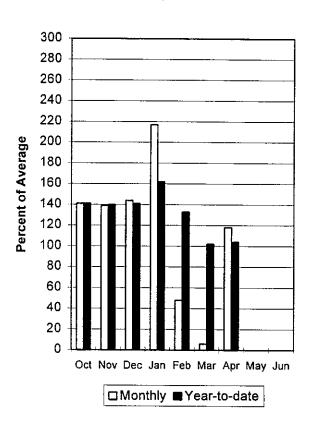
### E. Garfield, Kane, Washington, & Iron co. May 1, 1997

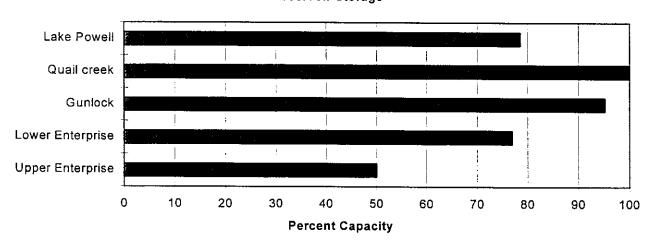
Snowpacks in this region are much below normal at 89% of average, up 20% relative to last month and about 3.5 times more than last year. Snowmelt in April was just 43% of normal which accounts for the percent of average snowpack increase. This snowpack should produce below normal water supply the remainder of this spring. Precipitation during April was near normal at 118% of average, bringing the seasonal accumulation (Oct-Apr) to 104% of normal. General water supply conditions are below average. Reservoir storage is at 90% of capacity.

### Mountain Snowpack

## 35 (ii) 30 25 20 15 10 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun Current - Average Maximum Minimum

### Precipitation





E. GARFIELD, KANE, WASHINGTON, & IRON Co. Streamflow Forecasts - May 1, 1997

	==========	=========	=======================================	==========	=========		========	========
		<=====================================	Drier ====	== Future C	onditions	====== Wetter	====>>	
Forecast Point	Forecast	=======		= Chance Of	Exceeding *	* =========	  -=======	
	Period	90%	70%	:	Probable)		10%	30-Yr Avg.
*************************		(1000AF)	(1000AF)	(1000AF) 	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
COAL CK nr Cedar City	APR-JUL	4.3	9.3	12.2	65	15.1	20	18.8
LAKE POWELL INFLOW	APR-JUL	9978		12000	155	İ	14000	7735
VIRGIN R or Hurricane	APR-JUL	15.0		40	51	İ	80	79
SANTA CLARA R nr Pine Valley	APR-JUL	1.01		3.00	57		5.99	5.30

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Reservoir Storage (1000 AF) - End of April

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Watershed Snowpack Analysis - May 1, 1997

				=======	:======================================	========	========	
	Usable	*** Us	able Stora	ge ***		Number	This Yea	ras % of
Reservoir	Capacíty	This	Last		Watershed	of	=======	=======
		Year	Year	Avg	D	ata Sites	Last Yr	Average
######################################		=======	========	=======	=======================================	========	=======	========
GUNLOCK	10.4	9.9	9.6		VIRGIN RIVER	5	199	66
LAKE POWELL	24322.0	19108.0	20186.0	j	PAROWAN	2	212	81
QUAIL CREEK	40.0	40.0	40.0	j	ENTERPRISE TO NEW HARMON	Y 2	0	0
UPPER ENTERPRISE	10.0	5.5	7.7		COAL CREEK	2	177	72
LOWER ENTERPRISE	2.6	1.2	0.4		ESCALANTE RIVER	2	0	201
					E. GARFIELD, KANE, WASHI	N 9	347	89

<sup>\* 90%, 70%, 30%,</sup> and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

- (1) The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) The value is natural flow actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH AS Of MAY 1, 1997

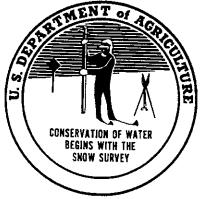
SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
AGUA CANYON SNOTEL	8900	5/01	1	0.08	0.0	ı	DRY BREAD POND SNOTL	8350	10/9	1	26.75	18.6	18.0
ALTA CENTRAL	8800	5/02	109	46.7	46.2	33.6	DRY FORK SNOTEL	7160	5/01	1	8.45	12.7	ı
ASHLEY TWIN LAKES	10500				t	16.7	EAST SHINGLE LAKE	9800				ı	28.6
BEAVER DAMS SNOTEL	8000	5/01	1	0.08	0.0	5.5	EAST WILLOW CREEK SN	8250	5/01	,	4.25	0.0	٥.
BEAVER DIVIDE SNOTL	8280	5/01	•	4.08	7.2	3.4	FARMINGTON CANYON L.	6950	4/28	59	26.6	25.6	21.9
BEN LOMOND PK SNOTL	8000	5/01	1	63.85	36.5	33.9	FARMINGTON CN SNOTEL	8000	5/01		50.58	35.8	19.9
BEN LOMOND TR SNOTL	0009	5/01	1	16.35	3,3	6.4	FARNSWORTH LK SNOTEL	0096	5/01		26.68	18.6	21.0
BEVAN'S CABIN	6450	4/27	14	6.2	4.0	4.6	FISH LAKE	8700	4/27	4	1.4	0.0	5.2
BIG FLAT SNOTEL	10290	5/01	ı	24.68	17.2	20.3	FIVE POINTS LAKE SNO	10920	10/5	ı	24.75	21.6	17.8
BIRCH CROSSING	8100	5/01	0	0.0	0.0	9.1	FRANCES FLATS	6700	5/01	18	6.1	14.9	0.7
BLACK FLAT-U.M. CK S	9400	2/01	,	9.28	6.8	9.9	G.B.R.C. HEADQUARTER	8700	4/27	39	17.1	12.0	15.4
BLACK'S FORK GS-EF	9340	4/28	20	8.9	10.0	9.5	G.B.R.C. MEADOWS	10000	4/27	80	33.7	29.5	26.1
BLACK'S FORK JUNCTN	8930	4/28	17	6.5	10.2	7.4	GARDEN CITY SUMMIT	7600	4/28	55	22.0	13.8	15.9
BOX CREEK SNOTEL	9800	5/01	ŀ	11.18	7.5	8.8	GEORGE CREEK	8840				1	ı
BRIAN HEAD	10000	4/27	50	20.8	12.8	21.6	GOOSEBERRY R.S.	8400	4/27	23	7.6	b. 4	1.6
BRIGHTON CABIN	8700	4/30	75	31.9	33.8	24.8	GOOSEBERRY R.S. SNOT	7900	5/01	,	0.08	0.0	3.7
BRIGHTON SNOTEL	8750	5/01	,	29.58	29.9	16.9	HARDSCRABBLE SNOTEL	7250	5/01	•	13.18	11.6	10.6
BROWN DUCK SNOTEL	10600	5/01	ı	27.28	21.2	20.3	HARRIS FLAT SNOTEL	7700	5/01	1	0.08	0.0	1.9
BRYCE CANYON	8000	4/30	0	0.0	0.0	8.0	HAYDEN FORK SNOTEL	9100	2/01	1	15.05	21.6	9.9
BUCK FLAT SNOTEL	9800	2/01	ı	27.5S	20.4	13.9	HENRY'S FORK	10000	4/28	31	11.5	18.0	13.6
BUCK PASTURE	9700	4/28	41	13.9	19.9	17.1	HEWINTA SNOTEL	9500	10/5	,	8.65	12.6	5.3
BUCKBOARD FLAT	0006	4/30	30	1.2	•	7.4	HICKERSON PARK SNOTE	9100	5/01	,	9.48	0.0	2.9
BUG LAKE SNOTEL	7950	5/01		34.3S	24.1	16.0	HIDDEN SPRINGS	2500	5/01	0	0.0	0.0	0.4
BURT'S-MILLER RANCH	1900	4/28	0	0.0	0.0	2.0	HOBBLE CREEK SUMMIT	7420	4/27	24	10.8	11.5	7.3
CAMP JACKSON SNOTEL	8600	5/01		12.68	0.0	2.0	HOLE-IN-ROCK SNOTEL	9150	2/01	,	8.05	3.6	2.3
CASTLE VALLEY SNOTL	9580	5/03	1	3.58	0.0	9.9	HORSE RIDGE SNOTEL	8260	5/01	1	33.58	25.5	14.4
CHALK CK #1 SNOTEL	9100	5/01	1	35.08	30.6	22.8	HUNTINGTON-HORSESHOE	9800	4/27	7.5	33.8	26.4	24.9
CHALK CK #2 SNOTEL	8200	10/5	,	17.48	16.1	9.6	INDIAN CANYON SNOTEL	9100	5/01	1	13.35	7.0	9.9
CHALK CREEK #3	7500	4/28	Ö	0.0	1.3	2.6	JOHNSON VALLEY	8850	4/27	4	1.3	1.2	3.8
CHEPETA SNOTEL	10300	5/01	•	14.65	9.6	12.0	KILFOIL CREEK	7300	4/28	42	17.8	15.5	6.6
CITY CREEK	7500	5/01	64	28.2	30.1	18.3	KILLYON CANYON	6300	4/28	0	0.0	0.0	1
CLEAR CK RIDG #1 SNT	9200	10/9	,	25.55	21.1	14.1	KIMBERLY MINE SNOTEL	9300	5/01	,	15.68	10.6	12.1
CLEAR CK RIDG #2 SNT	8000	5/01	1	11.25	10.4	5.6	KING'S CABIN SNOTEL	8730	5/01	t	12.75	1.5	0.9
CLEAR CREEK RIDGE #3	6600				,	0.1	KLONDIKE NARROWS	7400	4/30	42	18.8	17.0	14.1
COLD WATER SPRINGS	6030					ı	KOLOB SNOTEL	9250	5/01	1	10.58	4.2	16.4
CORRAL	8200				ı	•	LAKEFORK #1 SNOTEL	10100	5/01	ı	12.65	12.8	10.3
CURRANT CREEK SNOTEL	8000	5/01	1	5.28	4.8	2.6	LAKEFORK BASIN SNOTE	10900	5/01	1	30.28	9.62	25.9
DANIELS-STRAWBERRY S	8000	5/01	,	17.18	16.5	9.7	LAKEFORK MOUNTAIN #3	8400	4/28	13	5.8	0.0	1.8
DESERET PEAK	9250				ı	18.2	LAMBS CANYON	7400	4/29	56	10.7	11.5	9.2
DESERET PEAK AM	9250					15.3	LASAL MOUNTAIN LOWER	8800	4/28	6	5.6	0.0	4.6
DESERET PEAK SNOTEL	9250	5/01	ı	28.65	21.4	20.6	LASAL MOUNTAIN SNOTE	9850	5/01	1	6.78	3.5	7.9
DILL'S CAMP SNOTEL	9200	5/01	1	13.98	11.5	8.9	LILY LAKE SNOTEL	9050	5/01	,	16.15	14.9	8.7
DONKEY RESERVOIR SNO	9800	10/9	,	8.58	0.0	1.9	LITTLE BEAR LOWER	0009	4/28	4	1.5	0.0	1.6

SNOW COURSE	ELEV.	DATE	MONS	WATER	LAST	AVERAGE	SNOW COURSE	ELEV.	DATE	SNOW	WATER	LAST	AVERAGE
			DEPTH	CONTENT	YEAR	1961-90				DEPTH	CONTENT	YEAR	1961-90
LITTLE BEAR SNOTEL	6550	5/01		4.58	0.0	2.4	THISTLE FLAT	8500				1	1
LITTLE GRASSY SNOTEL	6100	5/01	1	0.08	0.0	0.	TIMBERLINE	9100					,
LONG FLAT SNOTEL	8000	5/01	,	0.08	0.0	2.0	TIMPANOGOS DIVIDE SN	8140	5/01	ı	26.65	17.4	16.8
LONG VALLEY JCT. SNT	7500	5/01	1	0.08	0.0	0.	TONY GROVE LK SNOTEL	8400	5/01	1	55.08	41.9	30.5
LOOKOUT PEAK SNOTEL	8200	10/5	ı	36.75	31.7	10.0	TONY GROVE R.S.	6250	4/28	11	4.0	2.1	3.2
LOST CREEK RESERVOIR	6130	4/28	0	0.0	0.0	0.0	TRIAL LAKE	0966	4/28	77	35.0	30.7	25.7
MAMMOTH - COTTONWD SNT	8800	5/01	,	29.18	20.6	12.4	TRIAL LAKE SNOTEL	0966	5/01	,	36.98	36.3	24.0
MERCHANT VALLEY SNOT	8750	5/01	ı	14.85	5.7	6.7	TROUT CREEK SNOTEL	9400	5/01	1	11.35	4.0	7.0
MIDDLE CANYON	7000	4/27	16	6.5	8. 13.	8.5	UPPER JOES VALLEY	8900	4/27	15	6.3	9.0	5.7
MIDWAY VALLEY SNOTEL	0086	2/01	ı	18.18	10.2	20.0	VERNON CREEK SNOTEL	7500	5/01	,	4.78	0.0	4.6
MILL CREEK	6950	4/29	61	24.5	23.8	18.8	VIPONT	7670				,	•
MILL-D NORTH SNOTEL	0968	5/01	ı	35.6S	28.3	13.2	WEBSTER FLAT SNOTEL	9200	5/01	,	0.08	0.0	5.1
MILL-D SOUTH FORK	7400	4/30	36	15.5	20.8	13.4	WHITE RIVER #1 SNOTE	8550	5/01	•	13.58	11.6	6.2
MINING FORK SNOTEL	8000	5/01	1	26.65	19.7	13.1	WHITE RIVER #3	7400	4/27	0	0.0	0.0	9.0
MONTE CRISTO SNOTEL	0968	5/01	1	42.58	39.7	26.2	WIDTSOE #3 SNOTEL	9500	5/01	1	12.8S	0.0	8.7
MOSBY MTN. SNOTEL	9500	2/01	ı	18.55	6.4	10.4	WRIGLEY CREEK	9000	4/27	27	11.1	9.1	8.0
MT.BALDY R.S.	9500	4/27	78	33.7	25.8	25.2	YANKEE RESERVOIR	8700	4/27	23	9.5	2.3	9.9
MUD CREEK #2	0098	4/27	38	17.5	16.7	8.2	NOTE:						
OAK CREEK	7760	4/27	22	7.6	7.6	9.0	The S flag following Water Content for SNOTEL	ter Co	tent for		sites indi	cates t	sites indicates relemetered
PANQUITCH LAKE	8200	4/27	0	0.0	0.0	1.1	data. The Depth reading preceeding S flagged	g prec	eding S		data was measur	easur	round the
PARLEY'S CANYON SNOT	7500	5/01	1	9.28	12.0	8.5	snow pillows at the time of the ground survey	te of t	ne ground		and may not be the	t be th	e same date as
PARLEY'S CANYON SUM.	7500	4/29	40	17.2	19.8	12.8	the telemetered value.						
PAYSON R.S. SNOTEL	8050	5/01	1	80·6	12.7	11.6							
PICKLE KEG SNOTEL	0096	5/01	ı	14.98	12.6	14.0							
PINE CREEK SNOTEL	8800	5/01	,	24.25	18.2	13.0							
RED PINE RIDGE SNOTE	9200	5/01	ı	14.48	15.3	12.2							
REDDEN MINE LOWER	8500	4/28	41	18.7	19.5	16.5							
REES'S FLAT	7300	4/27	13	4.1	6.5	7.8							
ROCK CREEK SNOTEL	7900	5/01	,	4.38	1.8	1.1							
z	8900	5/01		29.08	17.9	21.0							
	10000	5/01		21.38	12.5	15.1							
	8730	4/30	70	35.4	35.2	26.8							
SMITH MOREHOUSE SNTL	1600	10/5	h	8.25	14.6	6.1							
SNOWBIRD SNOTEL	9700	5/01		57.28	50.2	30.0							
SPIRIT LAKE	10300	4/28	46	15.5	9.3	15.3							
SQUAW SPRINGS	9300	4/27	7	2.7	0.5	4.1							
STEEL CREEK PARK SNO 1	10100	5/01	,	20.45	22.9	18.9							
STILLWATER CAMP	8550	4/28	18	7.5	11.5	7.5							
STRAWBERRY DIVIDE SN	8400	2/01		20.18	17.2	11.5							
STUART R.S.	7950				•	1.9							
SUSC RANCH	8200	5/01	0	0.0	0.0	5.6							
TALL POLES	8800	5/01	32	13.2	0.0	11.9							
THAYNES CANYON SNOTL	9200	10/5	1	29.75	32.5	12.0							

Issued by

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### Utah Basin Outlook Report

Natural Resources Conservation Service Salt Lake City, UT

